ORDER NO. VSD9912M618S
N01

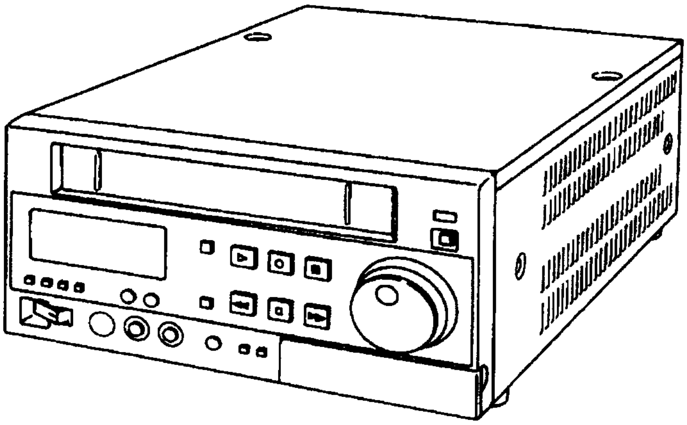
Service Manual

Panasonic S-VHS Hi-Fi

Video Cassette Recorder

AG-MD835E

SEC. 1	*Operating Instructions*
SEC. 2	*Service Information*
SEC. 3	*Electrical Adjustments*
SEC. 4	*Block Diagrams*
SEC. 5	*Schematic Diagrams, Circuit Board Diagrams*
SEC. 6	*Replacement Parts List*



Please use this service manual together with the service manual for Model AG-MD830E (Order No. VSD9408M637).

Panasonic

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

INTRODUCTION

This service manual contains technical information, which will allow service personnel to understand and service the Panasonic Video Cassette Recorder model AG-MD835E.
Please use this simplified service manual with the service manual for Model AG-MD830E (Order No. VSD9408M637).

Specifications

Rating Input: 120 – 240 V AC, 50 – 60 Hz, 0.5A

General

Recording System: 2-head helical scanning, azimuth recording
Colour System: PAL colour signals
Heads: 4 video heads
2 Hi-Fi audio heads
1 flying (rotary) erase head
Tape Speed: 23.39 mm/s
Tape Format: S-VHS, VHS
FF/REW Time: Approx. 2.5 min. (with NV-SE180 tape)
Operating Temperature: 5°C to 40°C
Operating Humidity: 30% to 75%
Dimensions: 270 × 131.5 × 365.5 mm
Weight: Approx. 6.9 kg

Video

Television System: CCIR standard (625 lines, 50 fields)
Luminance Signal: FM azimuth recording
Chrominance Signal: Subcarrier phase shift recording
Input: Line (BNC); 1.0 V[p-p], 75 Ω unbalanced
S-VIDEO (4P); Y: 1.0 V[p-p], 75 Ω unbalanced
C: 0.3 V[p-p], burst level 75 Ω unbalanced
Output: Line (BNC); 1.0 V[p-p], 75 Ω unbalanced
S-VIDEO (4P); Y: 1.0 V[p-p], 75 Ω unbalanced
C: 0.3 V[p-p], burst level 75 Ω unbalanced
Signal-to-Noise Ratio: VHS; Colour: Better than 47 dB
Resolution: S-VHS; More than 400 lines (colour, B/W)
VHS; More than 240 lines (colour, B/W)

Audio

Heads: Normal audio control; 1 fixed head
Hi-Fi audio; 2 rotary heads
Erase; 1 full-track erase head
1 audio track erase head
Tracks: 4 tracks (normal audio; 2 tracks, Hi-Fi audio; 2 tracks)
Input: Line (PHONO) × 2; –8 dBV, 47 kΩ unbalanced
Mic (mini jack) × 1; –50 dBV, 4.7 kΩ unbalanced (normal sound recorded on CH1)
Output: Line (PHONO) × 2; –8 dBV, 600 Ω unbalanced
Headphones (mini jack) × 1; –60 to –20 dBV, 8 Ω unbalanced
Monitor (PHONO) × 1; –8 dBV, 600 Ω unbalanced
Frequency Response: Normal audio; 50 Hz to 12 kHz
Hi-Fi audio; 20 Hz to 20 kHz
Signal-to-Noise Ratio: Better than 42 dB (normal audio only)
Dynamic Range: More than 90 dB (Hi-Fi audio only)
Crosstalk: Normal audio; Better than 40 dB
Hi-Fi audio; Better than 60 dB
Standard Accessory: Power cord

(1 Vrms=0 dBV)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

SERVICE MANUAL CONTENTS COMPARISON CHART

The ***AG-MD835E*** simplified service manual describes difference from the **AG-MD830E**.

Following chart shows contents of this AG-MD835E simplified service manual. It shows difference between **AG-MD830E** and ***AG-MD835E***, too.

Please refer to the Service Manual **AG-MD830E** (Order No.VSD9408M367) together with this simplified service manual for servicing ***AG-MD835E***.

Section	Contents of this Service manual (AG-MD835E)	Page Reference.	
		AG-MD835E	AG-MD830E
1 Operating Instructions	All page.	Page 1-1 to 1-8	-
2 Disassembly Procedures	There is no change.	-	Page 2-2 to 2-8
3 Mechanism	There is no change.	-	Page 3-1 to 3-34
4 Electrical Adjustment	Described only Video 1, 2 P.C. Board. (For other P.C.Board, refer to the AG-MD830E Service manual.)	Page 3-1 to 3-8	Page 4-11 to 4-14
5 Block Diagrams	Described only Video 1, 2 P.C. Board. (For other P.C.Board, refer to the AG-MD830E Service manual.)	Page BLK-1 to BLK-2	Page BLK-2 to BLK-8
7 Schematic Diagrams	Only difference from AG-MD830E	Page SCM-1 to SCM-15	Page SCM-3,11,12,13,22-28
8 Circuit Board Diagrams	Only difference from AG-MD830E	Page CBA-1 to CBA-6	Page CBA -3,4,5,6,9,10,11,12
9 Exploded Views & Replacement Parts List	Only electrical parts.	Page PRT-1 to PRT-12	Page PRT-2 to PRT-10

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Mother SCM002
Video 1 .... SCM003
Video 2 .... SCM007
Syscon SCM010
Reel servo SCM011
Servo SCM012
Motor drive 1 .... SCM013
DC-DC SCM014
Connection SCM015

CIRCUIT BOARD DIAGRAMS

SYSTEM CONTROL & SERVO P.C. Board (VEP06D28B) CBA-1
Video 1 P.C. Board (VEP03F35A) CBA-3
Video 2 P.C. Board (VEP03F36A) CBA-5

SECTIN 6: REPLACEMENT PARTS LIST

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. The resistance value must be more than 5MΩ.

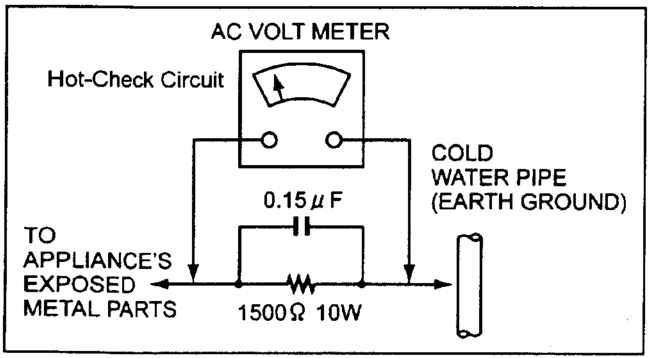


Figure1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.
2. Connect a 1.5Ω, 10W resistor, in parallel with a 0.15μF capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.15 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.1 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

NOTICE FOR MEDICAL USE

This is an apparatus intended for recording and playing-back of diagnosis image classified as;

–Protection against Electric Shock	Class I
–Protection against ingress of Water	Ordinary
–Mode of Operation	Continuous

–Not suitable for use in the presence of a Flammable Anaesthetic mixture with Air or with Oxygen or Nitrous Oxide.

FUSE RATING AND TYPE (F1101, F1102)

Rating	125V 2A
Type	Slow Blow

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ED) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist trap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.
   (most replacement ES devices are package with leads electrically shorted together by conductive foam,alminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device) .

Caution for AC Mains Lead

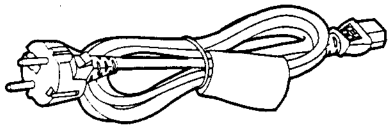
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

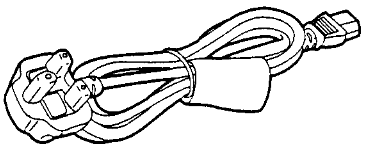
FOR CONTINENTAL EUROPE, ETC.

Not to be used in the U.K.



FOR U.K. ONLY

If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 13 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ◈ or the BSI mark ▽ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.
WARNING: THIS APPLIANCE MUST BE EARTHED.
IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

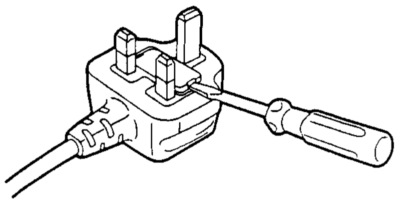
Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

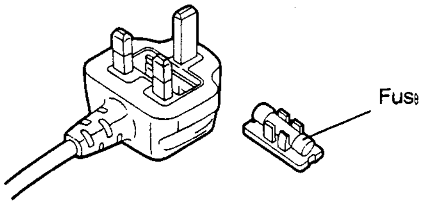
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



▭ indicates safety information.

IMPORTANT

"Unauthorized recording of copyrighted television programmes, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws."

Operating precaution

Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio signals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

- **THIS APPARATUS MUST BE EARTHED**
  To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.
  Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
  The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.
- **DO NOT REMOVE PANEL COVER BY UNSCREWING.**
  To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside.
  Refer servicing to qualified service personnel.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL INTERFACE BOARD TO QUALIFIED SERVICE PERSONNEL.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER CHANGE OF SWITCH SETTING INSIDE THE UNIT TO QUALIFIED SERVICE PERSONNEL.

CAUTION:

Do not install or place this unit In a bookcase, built-in cabinet or any other confined space in order to maintain adequate ventilation. Ensure that curtains and any other materials do not obstruct the ventilation to prevent risk of electric shock or fire hazard due to overheating.

▭ indicates safety information.

- Do not insert your fingers or any other objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the recorder when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Cassette tapes can be used only for one-side, one-direction recording. Two-way or two-track recordings cannot be made.
- Cassette tapes can be used for either Colour or Black & White recordings.
- Do not attempt to disassemble the recorder.
  There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the recorder examined for possible damage.
- Refer any needed servicing to authorized service personnel.

SECTION 1

OPERATING INSTRUCTIONS

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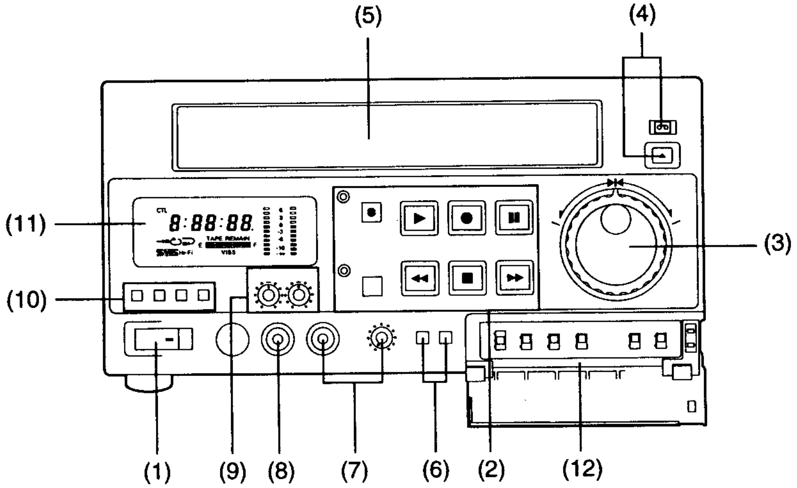
Controls

Front Panel



No.	Name	Page
1	Power switch	—
2	Operation buttons STOP, PLAY, REC, REW, FF, PAUSE/STILL, AUDIO DUB, BLANK SEARCH	E-11 – E-17
3	Search dial	E-16
4	Eject button/tape indicator	—
5	Cassette holder	—
6	Tracking buttons	E-16
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8	Microphone jack (mini jack)	E-14
9	Hi-Fi audio level control CH1/CH2	E-14
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11	Counter/audio level meter	E-11
12	Setting switch section AUDIO OUT selector	E-15
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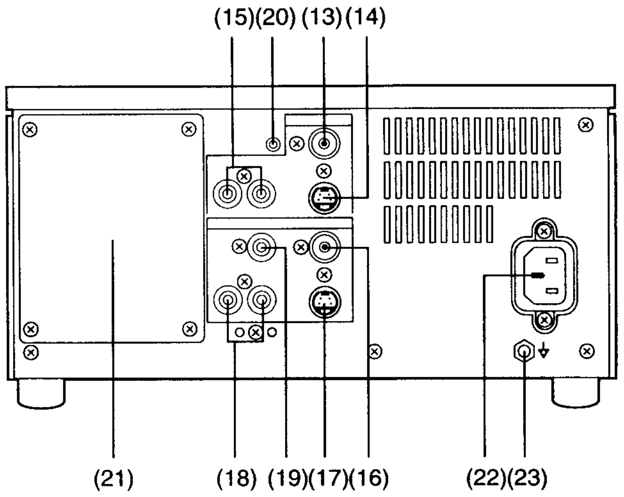
Controls

Rear Panel



No.	Name	Page
13	VIDEO input connector (BNC)	E-14
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15	AUDIO CH1/CH2 input connectors (PHONO)	E-14
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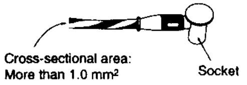
18	AUDIO CH1/CH2 output connectors (PHONO)	E-15
19	AUDIO MONITOR output connector	—
20	PAUSE REMOTE connector	E-18
21	Blank panel or RS-232C/34-pin options	E-18
22	Power socket	—
23	Equipotential terminal ⏚ When connecting this unit to any other component, make absolutely sure that it is properly grounded by connecting this terminal. When connecting, use the socket and be sure to use wire with a cross-sectional area of at least 1.0 mm^2. 	—

Menu Screens

The menu settings can be performed while monitoring the TV screen or the level meter.

Setting up your VTR for proper operation

When you received your VTR, it will be set up as follows:

MENU A

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
1001:00	VISS	OFF
1002:00	TAPE SELECT	– – E180
1003:01	AUTO BACK	ON
1004:00	TAPE IN MODE	STOP
1005:01	TAPE END MODE	REW
1006:00	REC TAPE END	STOP
1007:01	STBY OFF TIME	5 MIN

MENU B

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
1008:01	HI-FI REC	ON
1009:00	AUDIO DUB	CH1.CH2
1010:00	EDIT	OFF
1011:00	NOTCH	OFF

If optional AG-IA823 serial interface board is installed:

MENU C

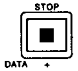
COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
3001:01	BIT LENGTH	8 BIT
3002:00	STOP BIT	STOP-1
3003:02	PARITY	NONE
3004:03	BAUD RATE	9600

To reset any of these defaults:

1. Press the STOP Button to place the VTR into the stop mode.
2. Set the MENU Switch to the SET position (switch is located under door on front panel).
   NOTE: When in the menu set position PLAY, REC, FAST FORWARD and REW will not function.
3. You can change these settings either by watching the counter indicator on the VTR or by watching the video monitor.
4. To change the individual default settings use the PLAY or REC buttons to select the different menu pages, which will display the different settings.
5. To select the individual settings either use the FF button or the inside search dial control. A flashing bar will highlight your selection if you are viewing your video monitor. If you use the counter indicator to make these changes, the first four digits select the item you would like to change and the last two selects the default setting (on/off, etc.).
   The counter display codes are on page E-9.
6. To change the default setting use either the STOP or REW buttons.
7. After making the necessary changes, make sure to reset the MENU set switch to OFF.

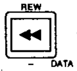
Operation

Use the operation buttons and search dial as shown below.



This moves the selection item cursor forward.

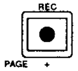
00:OFF		00:OFF
01:REC	→	01:REC
02:REC/PAUSE		02:REC & PAUSE



This moves the selection item cursor backward.

00:OFF		00:OFF
01:REC	←	01:REC
02:REC/PAUSE		02:REC/PAUSE

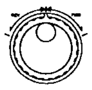
This returns to the previous menu page.



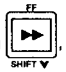
This advances to the next menu page.

This moves the menu selection to the item below.

TAPE IN MODE	00:STOP
TAPE END MODE	00:STOP
↓	
TAPE IN MODE	00:STOP
TAPE END MODE	00:STOP



This turns the inside search dial (jog function).

Instead of using , this can be used to move the menu selection to the item above or below.

TAPE IN MODE	00:STOP
TAPE END MODE	00:STOP
↓↑	
TAPE IN MODE	00:STOP
TAPE END MODE	00:STOP

Menu Screens

Menu Item Settings

Counter indicator No.*	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
1001	VISS	00: OFF 01: REC 02: REC/PAUSE	VISS signal recording and counter memory operation **OFF:** The VISS signal is not recorded (neither is the memory operation based on the VISS signal performed). **REC:** The VISS signal is recorded by pressing the REC and PLAY buttons together during recording. **REC/PAUSE:** The VISS signal is recorded when the recording or recording pause mode is released. "VISS" appears on the display tube when REC or REC/PAUSE is selected.
1002	TAPE SELECT	00: --E180 01: E240--	**--E180:** When a tape with a length of 180 minutes or less is used. **E240--:** When a tape with a length of 240 minutes or more is used.
1003	AUTO BACK	00: OFF 01: ON	Auto back space recording function setting **ON:** This ensures smooth continuity in recording. (The tape is rewound for approximately one second when the REC Button is pressed in the PLAY/STILL mode or the PAUSE/STILL Button is pressed during recording. When the PAUSE/STILL Button is pressed again, the tape plays back for one second and then recording starts.) **OFF:** Normal REC/PAUSE operation.
1004	TAPE IN MODE	00: STOP 01: REW	**STOP:** The unit is placed in the stop mode after the tape has been loaded. **REW:** The tape is rewound to its beginning, and then it stops.
1005	TAPE END MODE	00: STOP 01: REW	**STOP:** The tape stops when it comes to the end. **REW:** The tape is rewound to its beginning, and then it stops.
1006	REC TAPE END	00: STOP 01: EJECT	**STOP:** The tape stops when it comes to the end. **EJECT:** The tape is ejected when it comes to the end.
1007	STBY OFF TIME	00: 0 MIN 01: 5 MIN 02: (30 MIN)	Standby release time **0 MIN:** With full loading STOP, the tape cylinder stops immediately. **5 MIN:** The tape cylinder stops after REC/PAUSE continued for 5 minutes or longer. **30 MIN:** The tape cylinder stops after REC/PAUSE continued for 30 minutes or longer. (Every 5 minutes, however, the tape is advanced in the forward direction by 3 frames.)

---

* This appears along with the figure representing the setting which is indicated on the counter section of the display tube.

Menu Screens

Menu Item Settings

Counter indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
1008	HI-FI REC	00: OFF 01: ON	Hi-Fi audio recording (Cannot be used for audio DUB) **OFF:** Hi-Fi audio is not recorded. **ON:** Hi-Fi audio is recorded.
1009	AUDIO DUB	00: CH1.CH2 01: CH1 02: CH2	Selection of channel track for audio dubbing **CH1.CH2:** The sound is added to CH1 and CH2 simultaneously. **CH1:** The sound is added to CH1. **CH2:** The sound is added to CH2.
1010	EDIT See Note 1	00: OFF (regular operation) 01: ON (detail)	Editing/regular operation selection **OFF:** Regular operation **ON:** Detail
1011	NOTCH See Note 2	00: OFF 01: ON	For setting the NOTCH ON or OFF **OFF:** NOTCH OFF **ON:** NOTCH ON

The items shown below are displayed when the AG-IA823 serial interface board is used.

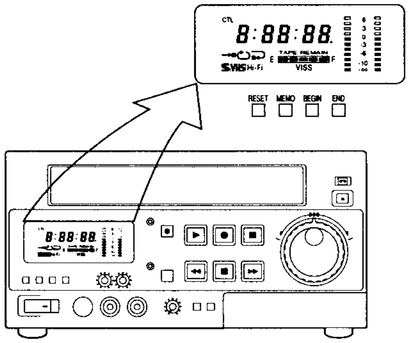
Counter indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
3001	BIT LENGTH	00: 7BIT 01: 8BIT	Character length setting **7BIT:** 7 bits **8BIT:** 8 bits
3002	STOP BIT	00: STOP-1 01: STOP-2	Stop bit setting **STOP-1:** 1 bit **STOP-2:** 2 bits
3003	PARITY	00: ODD 01: EVEN 02: NONE	Parity bit setting **ODD:** Odd **EVEN:** Even **NONE:** None
3004	BAUD RATE	00: 1200 01: 2400 02: 4800 03: 9600	Baud rate setting **1200:** 1200 bps **2400:** 2400 bps **4800:** 4800 bps **9600:** 9600 bps

Notes:

1. Edit function: When this is set ON, the noise reduction circuit for the video signals is set OFF. (The video noise will increase slightly. For regular use, EDIT OFF recommended.)

2. NOTCH: When there is high level of noise in the luminance signals, it may also affect the chrominance signals. In a case like this, set the NOTCH to ON. Since the luminance signal band is reduced slightly when the filter is set to ON, the NOTCH OFF position is recommended for regular use.

Counter Section



MEMO ☐ Each time the MEMORY Button is pressed, the mode changes in the following sequence:

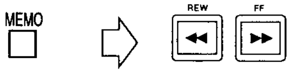
→■ Memory stop
↓
■↩ 1-time memory repeat
↓
↻ Continuous repeat
↓
No indication (OFF)

"VISS"
- This blinks while the VISS signal is being written on the tape.
- It lights when VISS is set on the menu.

Memory Stop

To use the AUTO MEMORY STOP function:

1. Press the MEMORY Button (MEMO).
   To turn on the MEMORY STOP function, the following symbol "→■" will be indicated in the counter display.
2. When the VTR is placed in record a VISS signal will be placed on the video tape.
3. Now when the video tape is rewound or fast forwarded it will stop at the start of any recording.
4. This function can be turned off by pressing the MEMORY Button (MEMO).
5. Repeat playback is covered on page E-13.



Press this to turn on "MEMORY STOP".

Press either REW or FF.

The tape stops automatically at the VISS write point or BGN set point.

Counter Reset

The counter display is reset to "0:00:00" when the RESET Button is pressed. The BGN/END setting is also set to "0:00:00".

RESET
0:00:00.

Remaining Tape

"TAPE REMAIN" provides a rough indication of the amount of tape remaining. The indication appears about 40 seconds after recording or playback has commenced (it does not appear until this time).

TAPE REMAIN
E
F

Tape end Tape beginning

Each lamp going off one after another indicates that the tape is approaching its end.

Note:
The remaining tape indicator provides only a rough indication: it is not meant to be precise.

VISS Signal

After VISS has been set on the menu screen, the VISS signal is automatically written on the tape when recording is started. It can also be written at the desired position on the tape by pressing the REC Button and PLAY Button simultaneously during recording.

- Locating particular scenes to be viewed becomes easy if VISS signals are written with each recording.
- "VISS" blinks on the counter section while the VISS signal is being written.

(1) Select 01 or 02 for VISS on the menu screen.

01: REC
02: REC/PAUSE

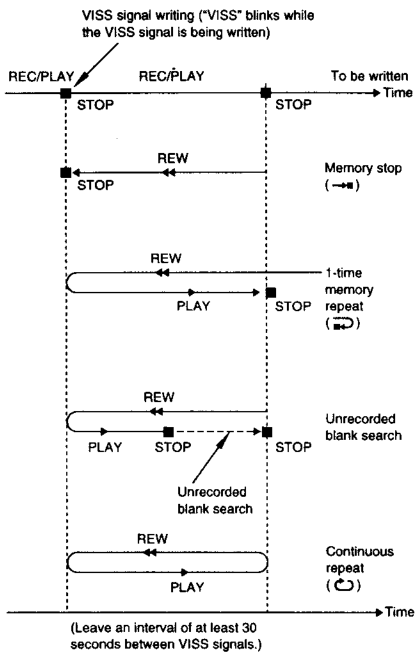
(2) Press the MEMORY Button to establish the memory mode. "VISS" now lights on the counter section.

Memory mode	Display	Function
MEMORY REPEAT	↻	Playback is repeated at the VISS write point.
MEMORY 1 TIME REPEAT	■↩	Playback is repeated only once at the VISS write point.
MEMORY STOP	→■	The tape stops at the VISS write point.

(3) Press the FF or REW Button.
When the VISS signal is located, the unit automatically operates in accordance with the memory mode.

- Leave an interval of at least 30 seconds on the tape for writing the VISS signal. (The signal will not be detected if the interval is less than 30 seconds long.)

VISS Setting


VISS signal writing ("VISS" blinks while the VISS signal is being written)
REC/PLAY
REC/PLAY
To be written
Time
STOP
STOP
REW
STOP
Memory stop (→■)
REW
PLAY
STOP
1-time memory repeat (■↩)
REW
PLAY
STOP
STOP
Unrecorded blank search
Unrecorded blank search
REW
PLAY
Continuous repeat (↻)
Time

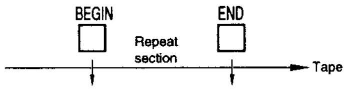
(Leave an interval of at least 30 seconds between VISS signals.)

Repeat Playback

(1) Turn VISS function OFF:
1) Press the MEMORY (MEMO) Button and select continuous repeat playback (MEMORY REPEAT ↻) or 1-time repeat playback (MEMORY 1 TIME REPEAT ■↩).

Press this and turn on "↻" or "■↩".

2) Press the BEGIN and END Buttons to set the tape beginning and ending positions for repeat playback.

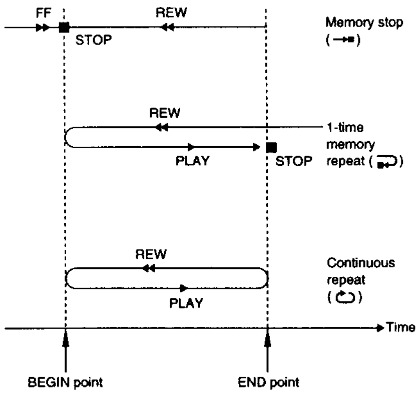

BEGIN
END
Repeat section
Tape

3) Press the FF or REW Button.

(2) While "VISS" is on the display tube:
The VISS signal is used for repeat playback. (Refer to the section on the VISS signal on page E-12.)

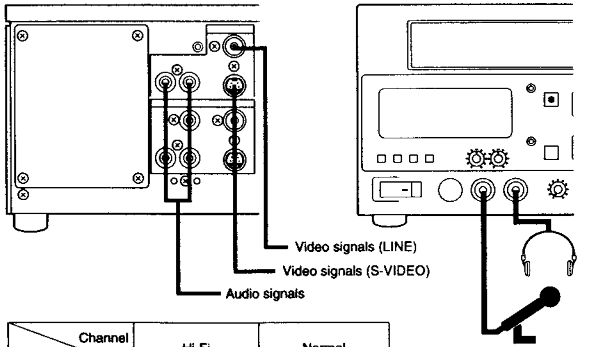
- When the beginning and ending positions are the same, the tape will be repeatedly played back between the beginning position and tape end.
- When the ending position comes after the actual tape end, the tape will be repeatedly played back between the beginning position and tape end.
- When the beginning position comes before the actual tape beginning, the tape will be repeatedly played back between the tape beginning and end position.
- The precision of repeat playback may be impaired when a short section (less than 20 seconds or so long) of the tape is to be repeatedly played back.

BEGIN/END settings (set VISS to OFF on the menu)


FF
REW
STOP
Memory stop (→■)
REW
PLAY
STOP
1-time memory repeat (■↩)
REW
PLAY
Continuous repeat (↻)
Time
BEGIN point
END point

(Leave an interval of at least 20 seconds between BEGIN and END.)

Recording



Microphone
(Sound from the microphone is recorded as Hi-Fi audio and normal audio on channel 1.)
Note:
When a microphone has been connected to the MIC jack and audio signals have been connected to the audio connectors for recording, recording from the microphone will take precedence.

Channel / Audio input	Hi-Fi	Normal
L/CH1	L/CH1*1	L/CH1
R/CH2	R/CH1*2	R/CH2
L/CH1 & R/CH2	STEREO (L/CH1 & R/CH2)	STEREO (L/CH1 & R/CH2)

The audio signals are recorded as indicated in the table on the left.

*1: The L/CH1 audio signals are recorded on both channels 1 and 2.

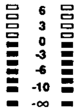
*2: The R/CH2 audio signals are recorded on both channels 1 and 2.

Preparations

- Load the cassette tape. (Check that the accidental erasure prevention tab on the tape is still intact.)
- Check menu for correct set up.
- Set the S-VHS REC MODE selector to the desired position.
  AUTO: At this position, the tape is automatically identified as a VHS or S-VHS tape and the signals are recorded in the corresponding mode.
  OFF: The signals are recorded in the VHS mode regardless of the type of tape used.
- Depending on the connections, set the INPUT Selector to S-VIDEO or LINE.
- When recording Hi-Fi audio, set On-Screen Hi-Fi REC (default setting) to ON.

Audio Level Adjustment (Hi-Fi audio only)

The audio level can be adjusted for Hi-Fi audio only. Turn the Hi-Fi Audio Level Control in such a way that the audio level meter indication is adjusted to around 3 (but not past the 3 level).



Recording

Recording starts when the REC and PLAY Buttons are pressed together or press REC button first and then PLAY. If PLAY button is pressed first, the continued portion is disturbed.

> The REC Button will not operate if the accidental erasure prevention tab on the cassette tape has been broken out. Use a tape with this tab still intact.

Proceed as follows when using the PAUSE Button.

(1) While playing back the tape, find the location to be recorded. Then press the PAUSE Button.
The unit is now set to the playback pause mode.

(2) Press the REC Button.
The REC Lamp now comes on, and the unit is set to the recording pause mode.

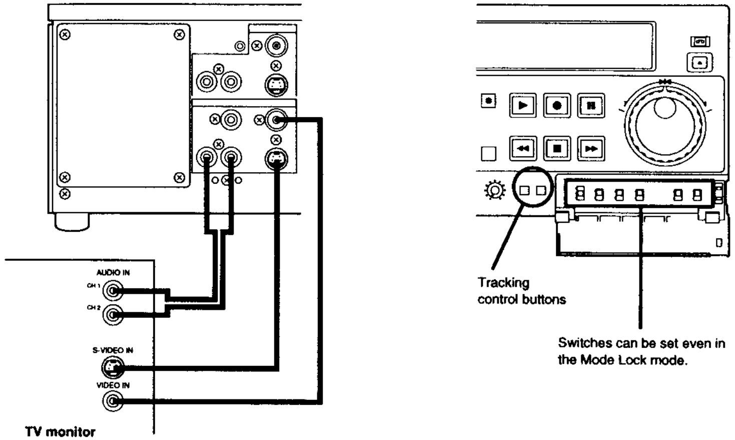
(3) When the PAUSE Button is pressed again, the unit is released from the pause mode, and recording begins.

Audio Monitoring

The audio signals are selected by the AUDIO OUT Selector.
When using headphones, the volume can be adjusted using the Headphone Level Control.

- To reduce the audio level, turn the control counterclockwise; to increase the audio level, turn it clockwise.
- The audio level may change if high-impedance headphones are connected to the MIC jack.

Playback

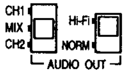


Preparations

- Set the following switches on the unit to OFF.
  Set the MODE LOCK Switch to OFF.
  Press the MEMORY Button to OFF.
- Switch on the power of the units connected to the unit.
- Load the pre-recorded tape.

Audio Monitor Output Selector

Set the AUDIO OUT Selector to the position corresponding to the type of sound desired.

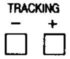


Mode Lock Switch

This switch makes it impossible to operate the switches on the front panel. When it is set to ON, none of the front panel switch can be operated. However, even with this switch at the ON position, the setting switches inside the cover, the remote controller or the RS-232C remote control signals can be used to operate the unit.

Playback

Press the PLAY Button.
Since this unit is equipped with an automatic digital tracking function, there is normally no need to adjust the tracking. However, if noise appears on part of the playback picture as shown below, press the Tracking "+" or "–" Button on the front panel to obtain a normal picture.
To return to the automatic tracking, press the Tracking "+" and "–" Buttons simultaneously.



- Tracking adjustment may be necessary when playing back a tape which has been recorded on a VTR other than this unit.

> If this unit is brought too close to the TV monitor, interference from the monitor may affect the audio signals, resulting in noise. Be sure to keep the unit at a distance (at least 20 cm or so) from the monitor.

Playback

Rewinding and Fast Forwarding

To rewind or fast forward the tape, press the REW Button or FF Button when the tape has stopped moving.

Search/Jog Playback

Search playback (outside ring)

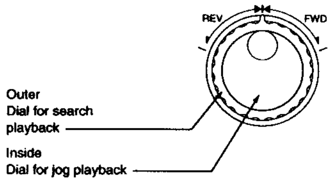
The unit is placed in the search mode by turning the outside ring of the search dial.
A tape can be played back up to 11 times the normal speed.
In the search mode, the FF Lamp (forward direction) or REW Lamp (reverse direction) blinks.

- Set the search dial to its centre click-stop position for still playback.

To release the search mode, press the PLAY, STOP, STILL, FF or REW Button.

Jog playback (inside ring)

The unit is placed in the jog mode when the search dial is set to the search/pause (centre click-stop) position.
When the inside ring is now turned, the tape speed can be varied from −1× to +1× the normal tape speed.
Still playback is established when the inside ring is no longer turned.



- A colour programme may appear in black and white during search or jog playback: this is normal and not indicative of malfunctioning.
- The playback pictures may appear distorted during search or jog playback: this is normal and not indicative of malfunctioning.
- No sound is heard during search or jog playback. Normal sound is heard at a tape speed of 1/2× or higher.

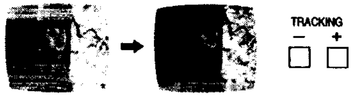
To Finish Playback

Press the STOP Button.

Still Playback and Slow-Motion Playback

The unit is placed in the still picture mode when the search dial is set to its centre click-stop position.

- When noise appears during still playback, proceed with the slow tracking adjustment.



Slow Tracking Adjustment

If noise should appear at the top or bottom of the picture during still playback or slow-motion playback (1/25 to 1/2× normal tape speed), press the Tracking "+" or "−" Button to reduce the noise in the slow-motion playback mode.

- When still playback continues for more than 5 minutes, the unit will be placed automatically in the stop mode in order to protect the video heads.
- No sound is heard during still playback.
- During still playback a colour programme may appear in black or white or the playback image may darken: this is normal and not indicative of malfunctioning.
- Depending on how the tape was recorded, noise may appear at the top or bottom of the screen during playback at 1/2× normal tape speed.

Field-by-Field Playback

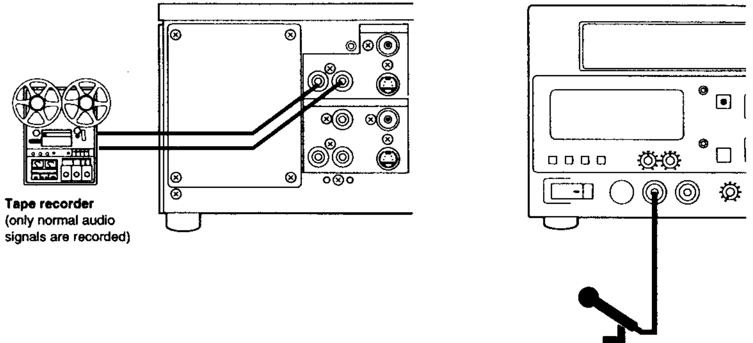
Press the FF or REW Button during still playback. When the FF Button is pressed, the tape is fed by one field in the forward direction; when the REW Button is pressed, it is fed by one field in the reverse direction. When the FF or REW Button is kept depressed, the tape is played back in the forward or reverse direction at approximately 1/25th of the normal speed.

Unrecorded Blank Search

If a tape with unrecorded blanks lasting 5 or more seconds has been loaded, these blanks will be detected automatically.
(1) Load the tape.
(2) Press the BLANK SEARCH Button.
The tape is searched automatically in the forward direction and is stopped automatically when an unrecorded blank lasting 5 or more seconds is detected.

Audio Dubbing

"Audio dubbing" is a function which is used to record sound onto an already recorded tape. Sound can be recorded onto normal audio track CH1 or CH2 or onto both the CH1 and CH2 channels. (It cannot be recorded onto the Hi-Fi audio tracks.)



It is not possible to record MIC input audio and audio input signals at the same time. The microphone takes precedence when connections are made to both to the MIC jack and audio connectors.

Microphone
(only normal audio CH1 signals are recorded)

Preparations

- Load the pre-recorded cassette tape.
  (Check that the accidental erasure prevention tab on the tape is still intact. When it has been broken out, the AUDIO DUB Button will not function even if it is pressed.)
- Using AUDIO DUB on the menu screen, select the channels on which the sound is to be added (audio dubbing).

Operation

(1) Press the PLAY Button to start playback.
(2) Press the PAUSE/STILL Button where the sound is to be added (audio dubbing) to place the unit in the pause mode.
(3) Press the AUDIO DUB Button.
(4) Audio dubbing starts when the PAUSE/STILL Button is pressed to release the unit from the pause mode.
(5) To stop the audio dubbing, press the STOP Button.

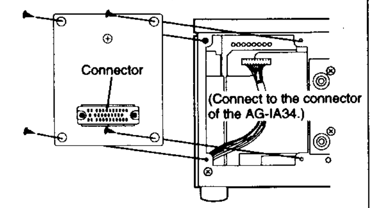
- When audio dubbing is performed, the previously recorded sound will be erased and the new sound will be recorded in its place.
- Bear in mind that howling may occur if audio dubbing is performed with the unit placed near a TV set.
- Audio dubbing cannot be performed when the tape's accidental erasure prevention tab has been broken out.

Remote Control

The unit can be operated from a distance by installing the AG-IA34 interface which is available as an optional accessory.

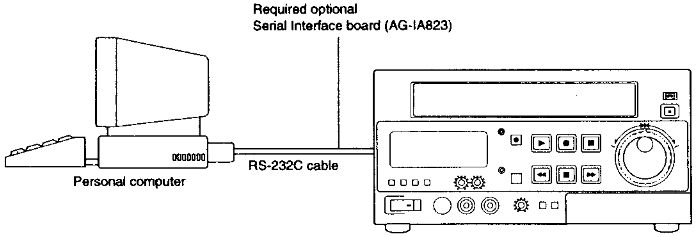
Mounting the 34-pin interface board

First remove the board mounting plate where the interface board is to be mounted, mount the board, connect the connector and screw the mounting board into place.



Computer Remote Control

Using the optional RS-232C serial interface board (AG-IA823) and RS-232C cable, as shown in the figure below, a personal computer can be used to operate the unit in various ways.



Cautions for Use

- Do not insert fingers or any other objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the unit and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, turn the Power OFF and disconnect the power plug from the AC outlet.
- Do not leave a cassette in the unit when not in use.
- Do not block the ventilation slots on the sides of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Keep the VTR away from flower vases, tubs, sinks, etc. **CAUTION:** If liquids should be spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, remove power and consult qualified service personnel.
- Wipe the VTR with a clean, dry cloth. Never use cleaning fluids, chemicals or wax.
- Do not attempt to disassemble the unit. There are no user serviceable parts inside.
- If any liquid spills inside the unit, have the unit examined for possible damage.
- Refer any needed servicing to authorized service personnel.

Cleaning care for video heads

If the screen should appear as shown below, it means that the video heads are dirty. It is recommended that you clean the heads periodically. Use the optional cleaning tape and special purpose cleaning fluid to clean the heads. Consult with your dealer if the symptoms should persist even after cleaning.

Notes:

- We do not recommend that you attempt to clean the video heads yourself.
- Repeated head cleaning will shorten the service life of the video heads.
- Nothing can be recorded on the head cleaning tape.
- If you use cleaning fluid, wipe the cleaned heads with a dry cloth before using the unit.

Dew Indication

When dew is detected, the safety device of this unit will operate in order to protect the cassette tape and video heads. In case of dew detection, the "d" mark in the counter lights. Wait until the "d" mark goes out with Power switch turned ON to operate the VTR.

"d" mark lights.

Note:

Dew condensation normally occurs gradually. Therefore, there may be cases in which the "d" mark does not start flashing until 10 or 15 minutes after dew has begun to condense. In particular, if the temperature or humidity in the room change, wait about 20 minutes before using the unit.

Cause of Condensation

Condensation forms if warm air comes in contact with a cold object, for example on a window in a well-heated room in winter. It may form if the unit or the video cassette is exposed to sudden changes in temperature and humidity such as may occur when the unit or the video cassette is taken from a cold to a warm place.

For instance:

- In a room where the heater has just been turned on in winter;
- In a room with steam or high humidity;
- In the unit or the cassette is brought from cold surroundings into a well-heated room.

Troubleshooting

Check out the points in the table given below, and consult with your dealer if the trouble should persist.

Trouble	Checkpoint/Remedial Action	Ref. Page
No power	• Has the power cable been connected?	-----
No operation even when an operation button is pressed	• Is the power switch in the ON position? • Has a cassette tape been loaded? • Is "d" displayed indicating condensation lit? Keep the power supplied to the unit and wait until the "d" in display goes off. • Is the Mode Lock Switch at the OFF position?	----- ----- E-19 E-15
No recording	• Has the tape's accidental erasure prevention tab been broken out? • Has the INPUT Selector been set to the proper position?	----- E-14
Noise appears on playback pictures.	• Press the Tracking Buttons and adjust.	E-15, E-16
No repeat playback	• Has the MEMORY (MEMO) Button been set to the proper position? • Has the counter been reset? • Is the VISS setting on the menu screen at OFF? • Has an interval of at least 20 seconds been given between BEGIN and END?	E-11 E-11 E-9 E-13
No VISS signal writing	• Is the VISS setting on the menu screen at REC or REC/PAUSE? • Has an interval of at least 30 seconds been given between one VISS and another VISS signal?	E-9 E-12

Error Display

The following error messages will be displayed on the tape counter if an abnormality occurs in the unit. In this case, follow instructions described below.

■ When an error code appears:

- An error code appears on the display.
- All operations are shut down when an error code appears on the display.
- If the error is not released even after taking the remedial action described below, switch off the power, disconnect the power cable from the power outlet, and contact your dealer immediately.

■ List of error codes

Error Code	Malfunction	Remedial action
E-2	Malfunction in elevator section	These errors may occur if the video cassette has not been loaded properly. Try switching the power off and turning it back on again.
E-3	Malfunction in loading section	
E-4	Malfunction in cylinder section	These errors may occur if there is something wrong with the state of the video cassette. Try switching the power off and turning it back on again and replacing the video cassette.
E-5	Malfunction in reel section	
E-6	Incorrect tape tension	
E-7	Malfunction in solenoid	Try switching the power off and turning it back on again.

SECTION 2

SERVICE INFORMATION

CONTENTS

2-1. COMPARISON CHART 2-1

  2-1-1. Electrical Replacement Parts 2-1

  2-1-2. Mechanical Parts 2-1

  2-1-3. Function 2-1

2-2. Service Information 2-2

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  2-2-2. TP Board (VFK1521) 2-2

  2-2-3. TP and SW Location 2-3

  2-2-4. Substitution of the Board 2-4

2-3. SPECIAL TOOLS AND JIGS 2-6

2-1. COMPARISON CHART

The following charts describe the major different parts from the basic model AG-MD830E to the new model AG-MD835E.

2-1-1. Electrical Replacement Parts

Ref. No.	AG-MD830E	AG-MD835E	PC	PART NAME/DESCRIPTION
E5	VEP03B32A	VEP03F35A	1	VIDEO 1 C.B.A.
E6	VEP03B33A	VEP03F36A	1	VIDEO 2 C.B.A.
E7	VEP08164B	------	0	VIDEO 3 C.B.A.
E4	VEP06920B	VEP06D28B	1	SYSTEM CONTROL / SERVO C.B.A.
E13	VEJ1467	VEJ1917	1	REAR JACK C.B.A.
-	VEP05162I	VEP05162Q	1	HEAD AMP C.B.A
E9	VEP03B32A	VEP000D7A	1	MOTHER C.B.A.

2-1-2. Mechanical Parts

Ref. No.	AG-MD830E	AG-MD835E	PC	PART NAME/DESCRIPTION	Remarks
4-6	VXA5159	VXA6620	1	JACK PANEL	
4-32	VYP5452	VYP7304	1	FRONT PANEL	
5-6	VPG7276	VPG0B91	1	PACKING CASE	
5-1	VQT5833	VQT8400	1	OPERATING INSTRUCTION	⚠

2-1-3. Function

Function	AG-MD830E	AG-MD835E
TBC CIRCUIT	------	Included
DNR (Digital Noise Reduction) CIRCUIT	------	Included
3D Y/C SEPARATOR	------	Included

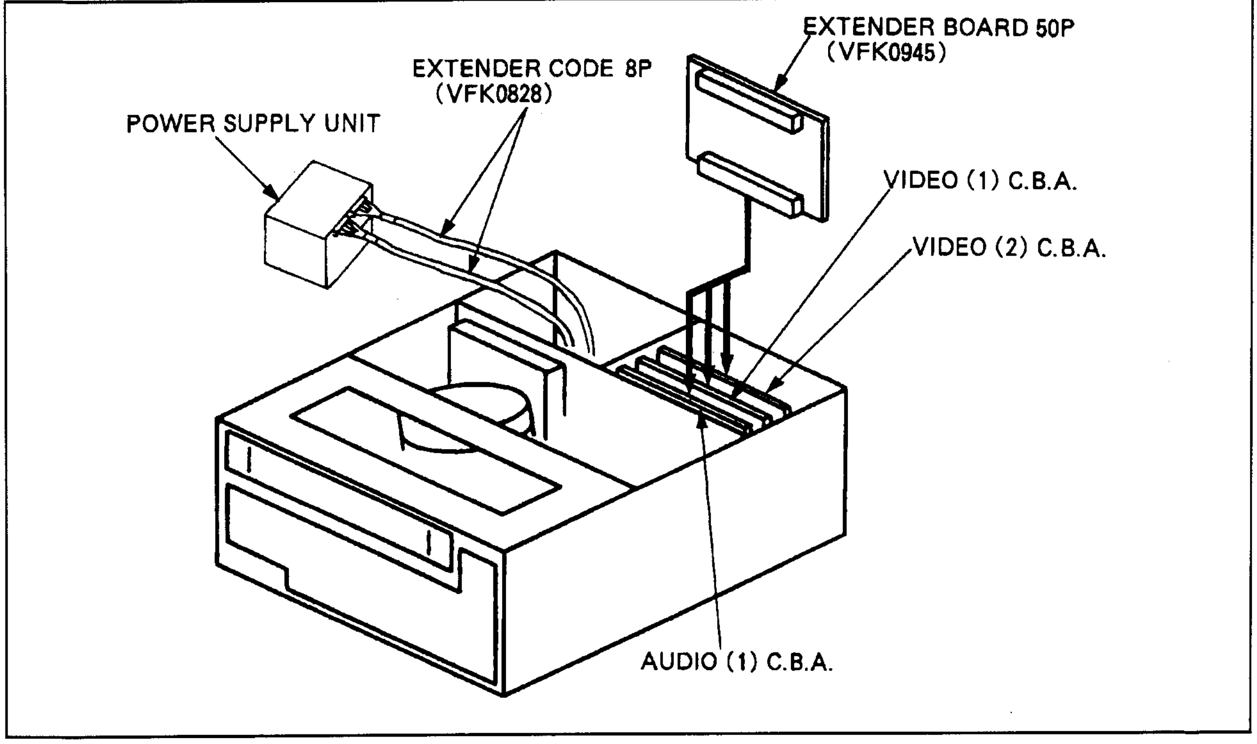
IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

2-2. Service Information

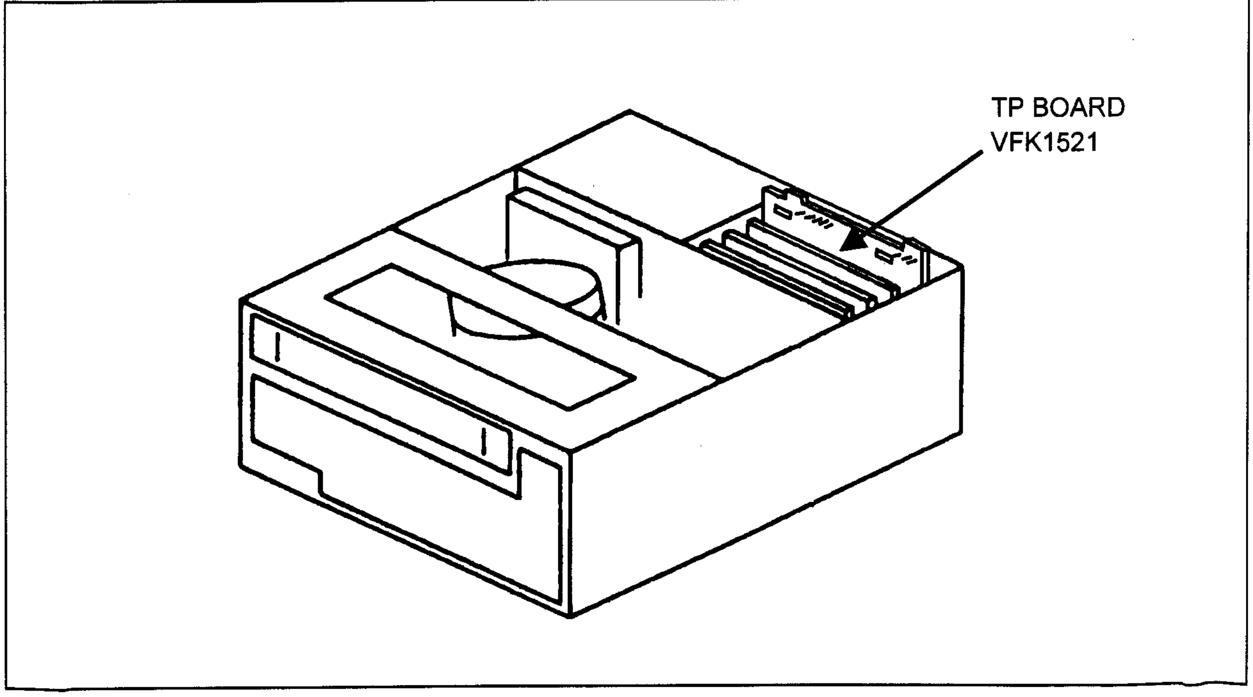
2-2-1.Extender Board (VFK0945), Extender Cable (VFK0828)

In order to perform some electrical adjustment and board servicing, Extender Board (VFK0945) for Video 1 and Video 2 Boards is required as shown below.


EXTENDER BOARD 50P
(VFK0945)
EXTENDER CODE 8P
(VFK0828)
POWER SUPPLY UNIT
VIDEO (1) C.B.A.
VIDEO (2) C.B.A.
AUDIO (1) C.B.A.

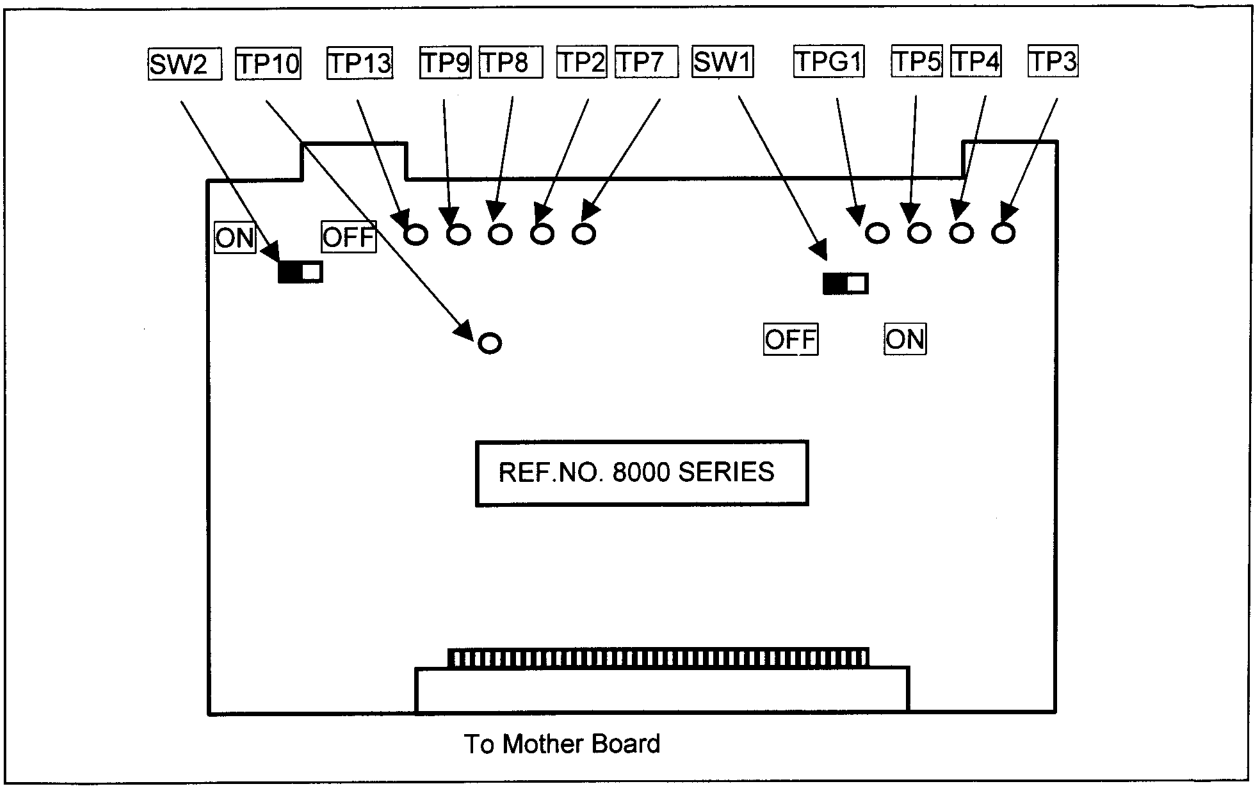
2-2-2.TP Board (VFK1521)

In order to perform Electrical and Mechanical Adjustments, TP (Test Point) Board is required as shown below.


TP BOARD
VFK1521

2-2-3.TP and SW Location

The following figure and tables show the location and function of TP's and SW's on the TP Board.


SW2
TP10
TP13
TP9
TP8
TP2
TP7
SW1
TPG1
TP5
TP4
TP3
ON
OFF
OFF
ON
REF.NO. 8000 SERIES
To Mother Board

2-2-3-1. TP function

No.	Indication	SIGNAL	
TP13	ART V	Artificial Vertical Sync	
TP9	CAP FG	Capstan FG	
TP8	SR PHOTO	Sensor Reverse Photo Transistor	
TP2	HSW	Head Switching Pulse	
TP7	PB CTL	Playback CTL Pulse	
TPG1	A GND	GND	
TP5	D 5V	+ 5V Power Supply	
TP4	A 5V	+ 5V Power Supply	
TP3	A12V	+ 12V Power Supply	
SW2	TBC ON	ON	TBC operation is turned ON.
		OFF	TBC operation is turned OFF.

<table>
<tr>
<td>SW1</td>
<td>TEST</td>
<td></td>
<td>
1. The mode settings which contained in the on-screen menu can be manually set
<table>
<tr><th>Pressing Switch</th><th>Mode</th></tr>
<tr><td>RSET</td><td>HI-FI Recording (ON/OFF)</td></tr>
<tr><td>MEMORY</td><td>Audio Dub (CH1, 2/CH1/CH2)</td></tr>
<tr><td>BGN</td><td>Edit (ON/OFF)</td></tr>
<tr><td>END</td><td>Y/C Filter (ON/OFF)</td></tr>
</table>
The tape counter indicates the mode as shown below.
F－1000
→ Y/C FILTER ON/OFF 1:ON, 0:OFF
→ EDIT ON/OFF 1:ON, 0:OFF
→ AUDIO DUB ON/OFF 1:ON, 0:OFF
→ HI-FI ON/OFF 1:ON, 0:OFF

2. The hour meter indicates seconds (0 to 3599sec.) instead of hours.

3. The deck enters into the playback mode when power switch is turned ON.

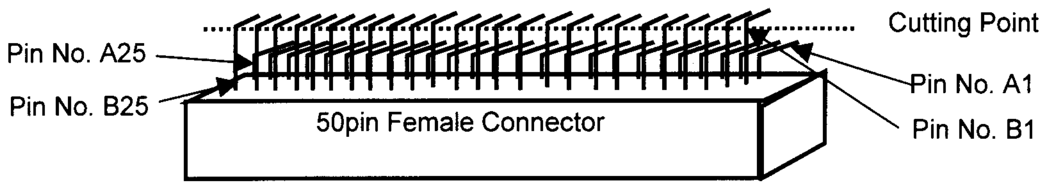
4. The deck is placed in the tracking fix mode and the auto tracking function is inhibited.

5. In the still playback mode and S-VHS switch on the front pocket Is at the auto position, the servo circuit is entered in the slow free run mode.

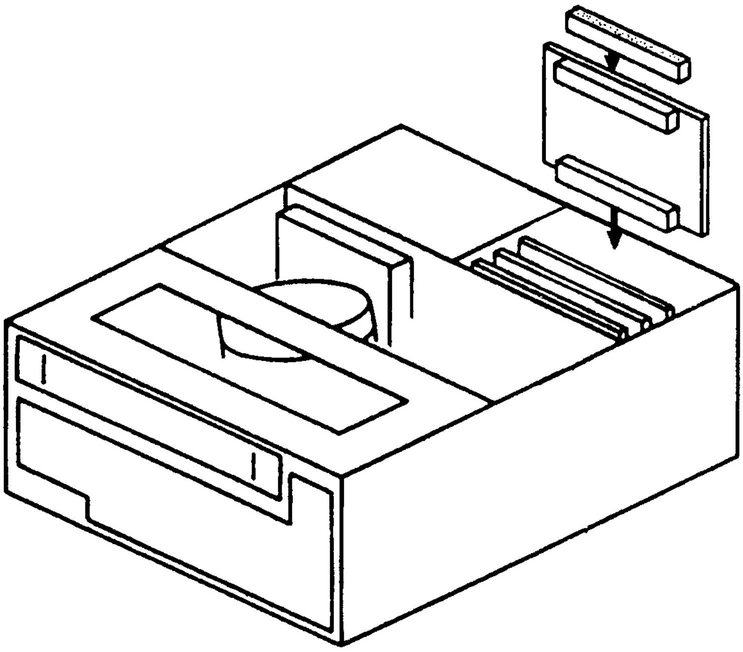
6. The hour meter reset and memory for the on-screen settings initialize can be started from this step.
More details, refer to item
</td>
</tr>
</table>

2-2-4. Substitution of the TP Board

If the TP Board (VFK1521) is not available, modify and use a 50pin female connector as shown below.



1) Cut all longer pins (pin B1-B25) on the 50pin female connector as shown the above.
2) Set the female connector on the male connector of the extender board (VFK0945).
3) Set the extender board with the modified female connector into the TP Board slot



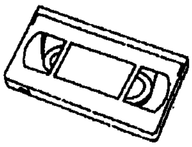
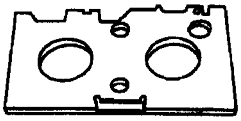
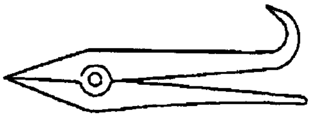
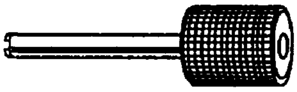
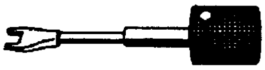
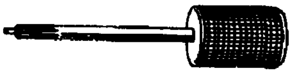
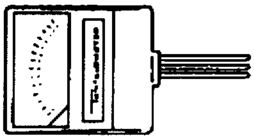
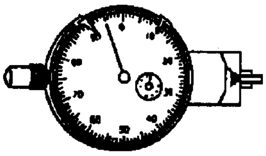
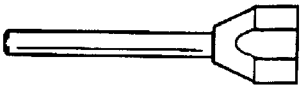
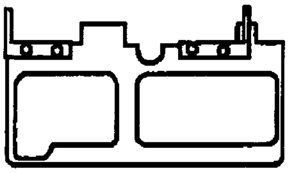
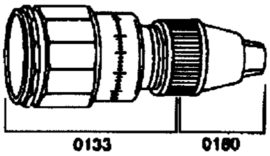
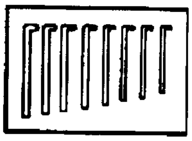
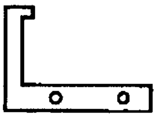
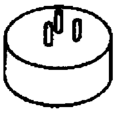
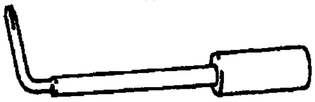
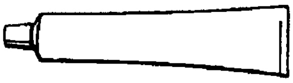
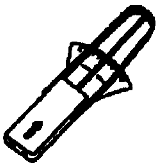
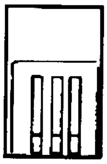
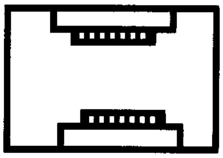
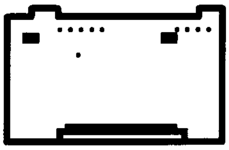
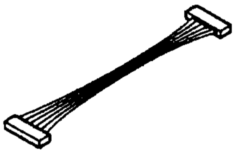
4) The relation between TP and switch referwnce number and Pin numbers on the 50pin female connector is as shown below.

Test Point on TP Board	**Pin No. on the Modified 50pin Female Connector**
TP13	20A
TP9	11B
TP8	10B
TP2	10A
TP7	9B
TPG1	1A, 1B, 6A, 6B, 13A, 13B
TP5	5A
TP4	3A, 3B
TP3	2A,. 2B
SW1	ON : Without short jumper wire. OFF: Connect a short jumper wire between pins 24B and GND.
SW2	ON: Connect a short jumper wire between pins 8B and GND. OFF: Without short jumper wire.

Hour Meter Reset

1. Place the deck in the test mode (SW8001 on the TP Board : ON).
2. Press the STOP + FF + REW Keys at the same time
3. Make sure that the 3 indicators STOP, FF, and REW start to blink and tape counter shows 0:00:00.

2-3. JIGS AND TOOLS

VFM8080HQFP ; VHS Alignment Tape 	VFK0181 ; Post Adjustment Plate 	VFK0335 ; Retaining Ring Remover 
VFK0329 ; Post Adj. Screwdriver 	VFK0328 ; H-Position Adj. Screwdriver 	VFK0330 ; Fine Adj. Screwdriver (3mm) 
VFK0132 ; Back Tension Meter (Tentelometer, Made in U.S.A) 	VFK0190 ; Rew Table Height Fixture 	VFK0851 ; Centering Fixture 
VFK0236 ; Tension Post Adj. Plate 	VFK0133 ; Dial Torque Gauge VFK0180 ; Plastic Clamper Only 	VFK0326 ; Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2, 2.4, 3 mm) 
VFK0806 ; Tension Sensor Adj. Fixture 	VFK0134 ; Adaptor for VFK0133 	VFK0269 ; L Type Screwdriver 
MOR265 ; Morlytone Grease (Black) (for metal part) VFK0680 ; S.C.R. Grease (White) (for plastic part) 	VFK66 ; Fan Type Tension Gauge 	VFK27 ; Head Cleaning Stick 
VFM0948 ; Check Light 	VFK0945:Extender Board 	VFK0131 ; High Quality Oil (for Capstan) Cleaning Liquid (Alchol) (Tape Transport Rubber Parts etc.) << PURCHASE LOCALLY >>
VFK1521 : TP Board 	VFK0828 : Extender code 8P 	

SECTION 3

ELECTRICAL ADJUSTMENTS

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3-1.TEST & SERVICE EQUIPMENT

To perform the electrical adjustment completely the following equipments are required.

1. VTVM (Vacuum Tube Volt Meter)
   Capacity : 0.001 to 50V
2. DVM (Digital Volt Meter)
   Capacity : 0.001 to 50V
3. Dual-Trace Oscilloscope (with probes)
   Capacity : 0.005 to 50V /div, DC to 30MHz
4. Frequency counter
   Capacity : 0 to 10MHz
5. Sine Wave Signal Generator (RC Oscillator)
   Capacity : 0 to 10MHz
6. Video Signal Generator (Composite)
7. Spectrum analyzer
8. Colour Monitor TV
9. WFM (Waveform Monitor)
10. Alignment Tape (VFM8180HADH)

3-2. HOW TO READ THE ADJUSTMENT PRODURE TABLE

[EXAMPLE]

BOARD	MAIN C.B.A
TP	TP3502 (F-2)
ADJ.	VR2002 (A-3)
TAPE	ALIGNMENT TAPE
INPUT	COLOUR BAR
MODE	PLAY
M. EQ	OSCILLOSCOPE
SPEC.	T = 6.5 +/- 0.5H

BOARD: Adjustment position of Print Circuit Board.

TP: Connection Point (Test Point) of measuring equipment.
*( ) shown TP location on the board.

ADJ.: Adjustment component
*( ) shown VR location on the board.

TAPE: Tape for adjustment.

INPUT: Supply a signal for adjustment.

MODE: Mode of VTR.
Example : REC to PLAY is recording signal and Playback the portion just recorded.

M.EQ: Measuring equipment.

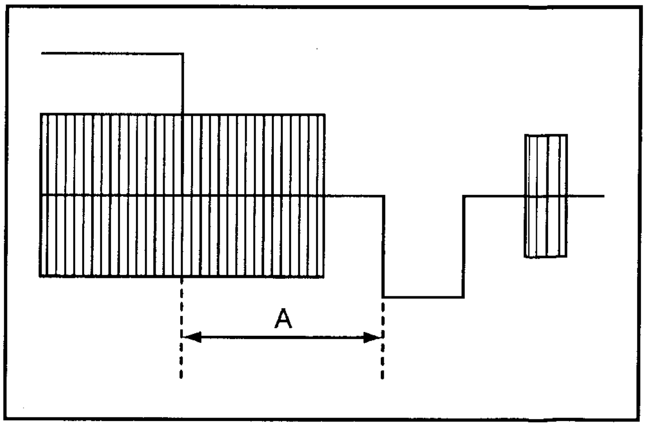
SPEC: Specification for adjustment.

3-3. ELECTRICAL ADJUSTMENT PROCEDURES

3-3-1. CHARACTER POSITION ADJ.

BOARD	VIDEO2 C.B.A.
TP	VIDEO OUT (P3301 11A)
ADJ.	VC3301
TAPE	-----
INPUT	-----
MODE	EE
M. EQ	OSCILLOSCOPE, WAVEFORM MONITOR
SPEC.	T = 9.5us +/- 1.0us

1. Display the Time Date character.
2. Connect the scope to the Video output.
3. Adjust VC3301 so that the timing T = 9.5us +/- 1.0us as shown below.

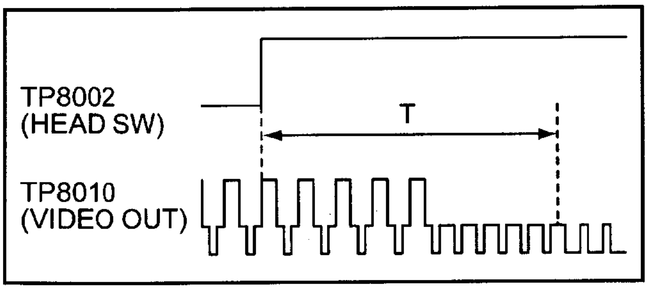


3-3-2. PG SHIFTER ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A
TP	TP8002 (HEAD SW) , VIDEO OUT
ADJ.	VR2002
TAPE	VFM8180HADH, PORTION : 2
INPUT	------
MODE	PLAY
M. EQ	OSCILLOSCOPE
SPEC.	T = 7.8H +/- 0.5H

Note: This adjustment should be performed only after Completion of the Tape Interchangeability adjustment.

1. Playback the alignments tape at the portion 2.
2. Connect the oscilloscope to TP8002 for CH1 and Video Out for CH2.
3. Adjust VR2002 so that the falling edge of switching pulse becomes 7.8H +/- 0.5H before the V-sync portion as shown below.



3-3-3. SLOW FREE RUN ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8009 (CAP FG)
ADJ.	VR2001
TAPE	VFM8180HADH, PORTION :2
INPUT	------
MODE	PLAY PAUSE
M. EQ	FREQUENCY COUNTER
SPEC.	455Hz +/- 5Hz

1. Playback the alignments tape at the portion 2.
2. Turn on SW8001 on the TP BOARD.
3. Connect the frequency counter to TP8009 on the TP BOARD.
4. Adjust VR2001 so that the reading of frequency counter is f = 455Hz +/- 5Hz.
5. After this adjustment turn off the SW8001.

3-3-4. SLOW TRACKING ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	VIDEO OUT
ADJ.	FWD : VR2005, REV : VR2006
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	SLOW PLAY BACK
M. EQ	MONITOR TV
SPEC.	NO NOISE BAR

Note: This adjustment should be performed only after completion of 4-3-4. SLOW FREE RUN adj.

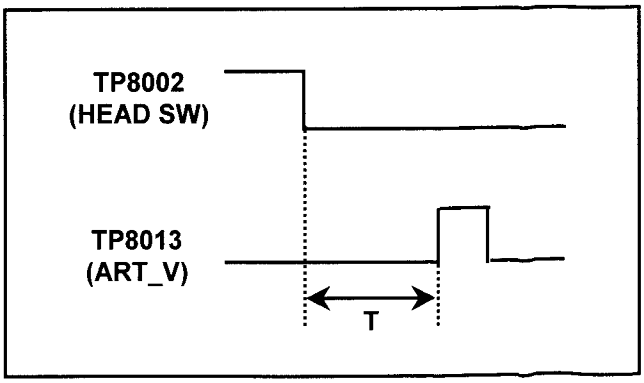
1. Supply the Colour bar signal to VIDEO INPUT.
2. Record the Colour bar signal for a few minutes.
3. Playback the recorded portion.
4. Push the tracking button "+" and "-" at same time.
5. Adjust VR2005 and VR2006 so that the noise bar dose not appear and lower on the monitor TV.

3-3-5. V-LOCK ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8002 (HSW),TP8013 (ART_V) [TP BOARD]
ADJ.	VR2004, SW8001 [TP BOARD]
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY PAUSE
M. EQ	OSCILLOSCOPE
SPEC.	T = 400us +/- 15us

Note: This adjustment should be performed only after completion of 4-3-3.SLOW TRACKING adj.

1. Supply the Colour bar signal to VIDEO INPUT.
2. Record the Colour bar signal for a few minutes.
3. Turn on SW8001 on the TP BOARD.
4. Playback the recorded portion in still mode.
5. Adjust VR2004 so that the TP8002, TP8013 signals timing is as shown below.
6. After this adjustment turn off the SW8001.



3-3-6. AUTO TRACKING GAIN ADJ.

BOARD	VIDEO 1 C.B.A
TP	TP3005 (AT)
ADJ.	VR3006
TAPE	------
INPUT	SINE WAVE (4MHz, 200mVp-p)
MODE	EE
M. EQ	OSCILLOSCOPE
SPEC.	A = 2.5V +/- 0.1V

[SET UP]

S-VHS SW : OFF
INPUT MODE : LINE

1. Set the sinewave generator output to 4MHz, 200mVp-p.
2. Supply the sinewave signal to TP3003 [Video 1 C.B.A].
3. Connect the oscilloscope to TP3005.
4. Adjust VR3005 so that the level A = 2.5V +/- 0.1V.

3-3-7. RF CHROMA LEVEL ADJ.

BOARD	VIDEO 1 C.B.A
TP	TP3603
ADJ.	VR3604
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M. EQ	OSCILLOSCOPE
SPEC.	A = 1.2V +/- 0.1V

[SET UP]

S-VHS SW : ON
INPUT MODE : LINE

1. Record the Colour bar signal for a few minutes.
2. Playback the recorded portion.
3. Adjust the "cyan potion" level A = 1.2V +/- 0.1V.

3-3-8. EE LINE OUTPUT LEVEL ADJ.

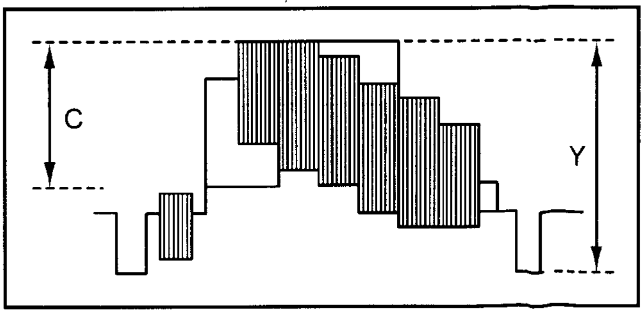
BOARD	VIDEO 2 C.B.A
TP	VIDEO OUT
ADJ.	VR3303 , VR3605
TAPE	S-VHS and VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	REC, EE, STOP
M. EQ	OSCILLOSCOPE or WAVEFORM MONITOR
SPEC.	Y = 1.0Vp-p +/- 0.02Vp-p (LINE IN) 1.0Vp-p +/- 0.08Vp-p (S-VIDEO IN) C = 0.65Vp-p+/-0.15Vp-p (LINE OUT : Cyan portion)

[LINE IN ADJUSTMENT]

1. LINE SELECT SW turn to "LINE" side.
2. Supply the Colour bar signal to VIDEO INPUT.
3. Record the Colour bar signal for a few minutes.
4. Playback the recorded portion.
5. Connect the M.EQ to the VIDEO OUTPUT with 75-ohm termination.
6. Adjust the VR3303 so that the Y level is Y = 1.0Vp-p +/- 0.02Vp-p.

[S-VIDEO IN ADJUSTMENT]

7. LINE SELECT SW turn to "S-VIDEO" side.
8. Supply the Colour bar signal to S-VIDEO INPUT.
9. Record the Colour bar signal for a few minutes.
10. Playback the recorded portion.
11. Connect the M.EQ to the VIDEO OUTPUT with 75-ohm termination.
12. Confirm the "Y" , "C" signal level is Y = 1.0Vp-p +/- 0.08Vp-p, C = 0.65Vp-p +/- 0.15Vp-p.
13. When the "Y" , "C" signal level without the specification, Adjust the VR3605 so that the "VIDEO INPUT" and "S-VIDEO INPUT" signals as same level.



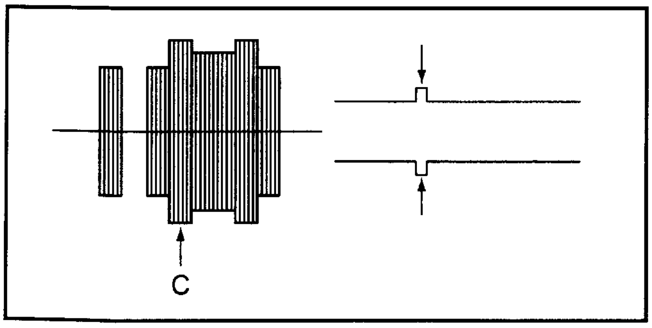
3-3-9. S-VHS RECORDING CURRENT ADJ.

BOARD	VIDEO 1 C.B.A./ HEAD AMP C.B.A
TP	TP5003 (Hot), TP5002 (GND)
ADJ.	VR3002 (REC-Y), VR5001 (REC-C) TP3002 (+5V), TP3004 (MUTE Y)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	REC
M. EQ	OSCILLOSCOPE
SPEC.	C = 35mVp-p +/- 2mVp-p Y = 150mVp-p +/- 10mVp-p

[SET UP]

S-VHS SW : ON
INPUT MODE : LINE

1. Supply the Colour bar signal to S-VIDEO INPUT.
2. Connect the oscilloscope to TP 5003 (HOT) and TP5002 (GND).
3. Place the unit in recording mode with Colour bar signal.
4. Before chrominance recording current adjustment, turn the VR3002 to clockwise.
5. Adjust VR5001 for C = 35mVp-p +/- 2mVp-p as a cyan level of the chrominance signal as shown below.
6. Adjust VR3002 for Y = 150mVp-p +/- 10mVp-p as luminance signal as shown below.



3-3-10. VHS RECORDING CURRENT ADJ.

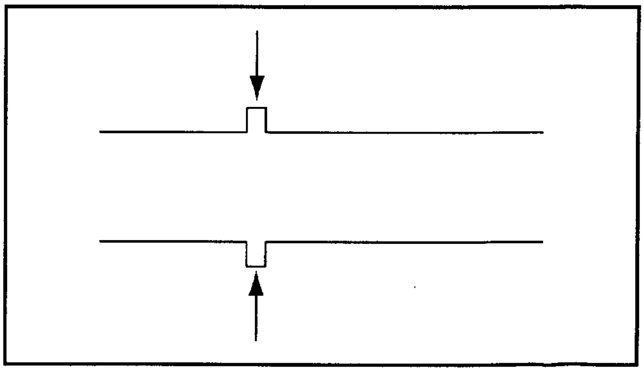
BOARD	VIDEO 1 C.B.A / HEAD AMP C.B.A.
TP	TP5003 (H), TP5002 (GND)
ADJ.	VR3001
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	REC
M. EQ	OSCILLOSCOPE
SPEC.	150mVp-p +/- 10mVp-p

Note: This adjustment should be always completed after 3-3-9. S-VHS Recording Current Adjustment.

[SET UP]

S-VHS SW : OFF
INPUT MODE : LINE

1. Supply the Colour bar signal to VIDEO INPUT.
2. Connect the oscilloscope to TP5003 (HOT) and TP5002 (GND).
3. Place the unit in recording mode with Colour bar signal.
4. Adjust VR3001 for 150mVp-p +/- 10mVp-p as a luminance signal as shown below.



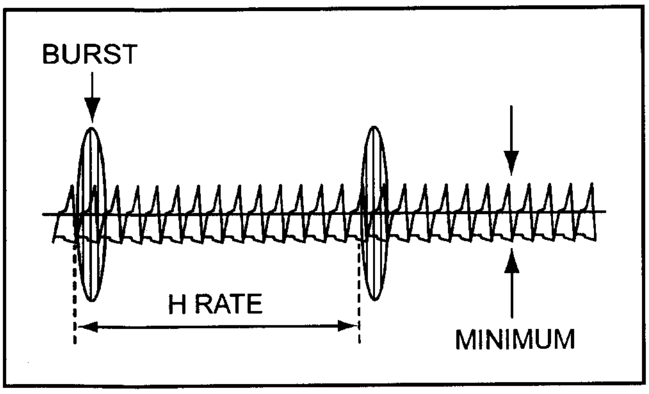
3-3-11. WHITE BALANCE ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ.	VR3502, VR3503
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	SELF-REC/PLAY
M. EQ	WAVEFORM MONITOR
SPEC.	A = LESS THAN 15mVp-p

[SET UP]

S-VHS SW : ON
INPUT MODE : LINE

1. Supply the Colour bar signal VIDEO INPUT.
2. Record the Colour bar signal by S-VHS mode for a few minutes.
3. Playback the just recorded portion.
4. Set the waveform monitor select switch to 4.43MHz BAND PASS mode.
5. Connect the waveform monitor to video output.
6. Adjust VR3502 and VR3503 so that the "A" portion becomes minimum as shown below.



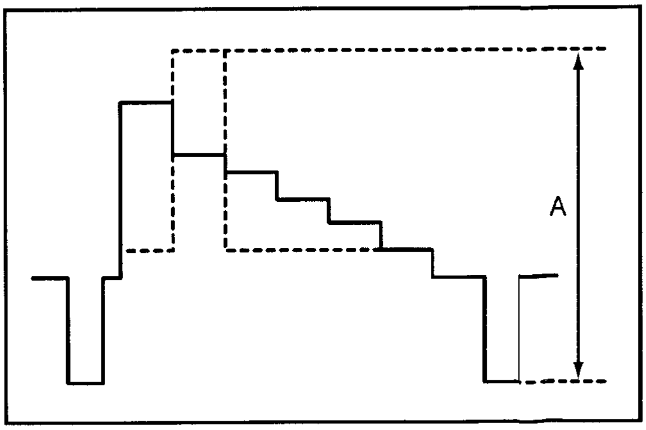
3-3-12. S-VHS PLAYBACK Y LEVEL ADJ.

BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT [75 ohm Termination]
ADJ.	VR3603 [S-VHS_Y_LEVEL] VR3602 [DEVIATION] VR3303
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	SELF-REC/PLAY
M. EQ	OSCILOSCOPE or WAVEFORM MONITOR
SPEC.	A = 1.0Vp-p+/- 0.02Vp-p

[SET UP]

S-VHS SW : ON
INPUT MODE : LINE

1. Supply the Colour bar signal to VIDEO INPUT and recording it for a few minutes.
2. Connect the oscilloscope to the video out with a 75-ohm termination.
3. Playback the just recorded portion.
4. Adjust VR3603 for A = 1.0Vp-p +/- 0.02Vp-p as shown below.



3-3-13. VHS Y PLAYBACK LEVEL ADJ.

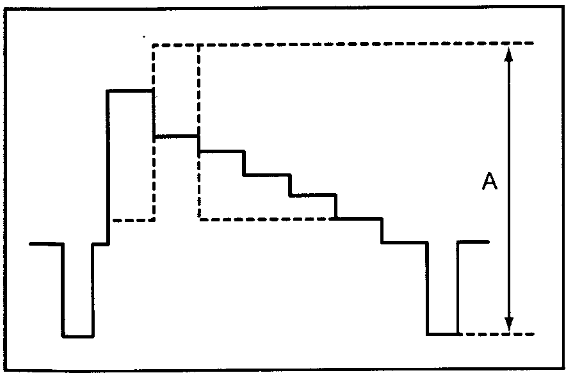
BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT
ADJ.	VR3601
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	SELF-REC/PLAY
M. EQ	OSCILLOSCOPE or WAVEFORM MONITOR
SPEC.	A = 1.0Vp-p+/- 0.02Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]

S-VHS SW : OFF
INPUT MODE : LINE
EDIT SW : OFF

1. Supply the Colour bar signal to VIDEO INPUT and recording it for a few minutes.
2. Connect the waveform monitor to the video out with a 75-ohm termination.
3. Playback the just recorded portion.
4. Adjust VR3601 for A = 1.0Vp-p+/-0.02Vp-p as a luminance level as shown below.



3-3-14. PICTURE CONTROL ADJ.

BOARD	VIDEO 2 C.B.A.
TP	TP3301 (PICT)
ADJ.	VR3304
TAPE	-----
INPUT	COLOUR BAR
MODE	EE
M. EQ	OSCILLOSCOPE
SPEC.	1.3V +/- 0.1V

1. Connect the scope to TP3301.
2. Adjust VR3304 so that the voltage is 1.3V±0.1V.

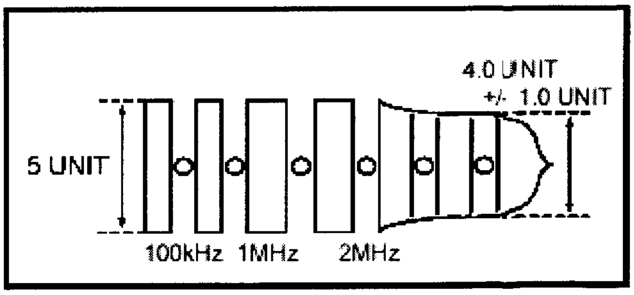
3-3-15. VHS PLAYBACK FREQUENCY RESPONSE ADJ.

BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT
ADJ.	VR3003
TAPE	VHS SELF RECORDED TAPE
INPUT	30% VIDEO SWEEP (WITH OUT BURST)
MODE	SELF-REC/PLAY
M. EQ	OSCILLOSCOPE or WAVEFORM MONITOR
SPEC.	100KHz : 2MHz = 5 : 4.0 +/- 1.0

[SET UP]

EDIT SW : OFF
NOTCH : LINE

1. Connect a sweep generator to VIDEO INPUT.
2. Record the sweep signal.
3. Playback the just recorded portion.
4. Connect the oscilloscope to video out.
5. Adjust VR3003 so that the playback frequency response becomes 5:4.0 +/- 1.0 at the marker points of 100KHz and 2MHz as shown below. (Vary the vertical scope setting until the 100KHz level reaches 5 division)



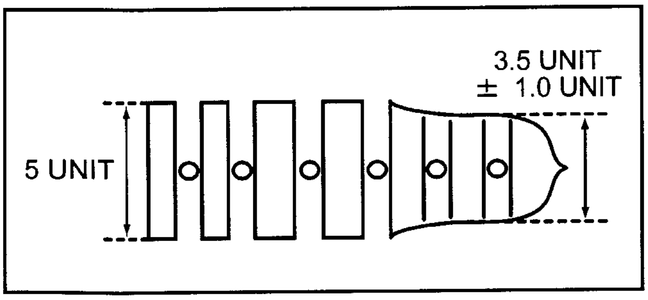
3-3-16. S-VHS PLAYBACK FREQUENCY RESPONSE

BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT
ADJ.	VR3004
TAPE	S-VHS SELF RECORDED TAPE
INPUT	30% VIDEO SWEEP (WITHOUT BURST)
MODE	SELF-REC/PLAY
M. EQ	OSCILLOSCOPE or WAVEFORM MONITOR
SPEC.	100KHz : 4MHz = 5 : 3.0+/- 1.0

[SET UP]

S-VHS SW : ON
EDIT SW : OFF
NOTCH : LINE

1. Connect a sweep generator to VIDEO INPUT.
2. Record the sweep signal.
3. Playback the just recorded portion.
4. Connect the oscilloscope to VIDEO OUT.
5. Adjust VR3004 so that the playback frequency response becomes 5 : 3.0 +/- 1.0 at the marker point of 100KHz and 4MHz as shown below. (Vary the vertical scope setting until the 100KHz level reaches division.)



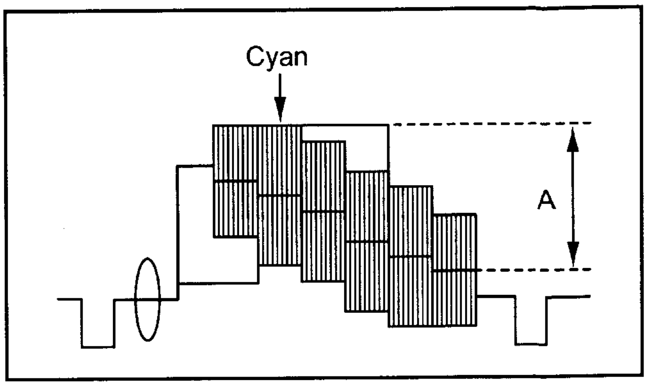
3-3-17. PLAYBACK CHROMA LEVEL ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ.	VR3505
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	SELF REC/PLAY
M. EQ	WAVEFORM MONITOR
SPEC.	A = 0.65Vp-p +/- 0.03Vp-p

[SET UP]

S-VHS SW : ON

1. Supply the Colour bar signal to VIDEO INPUT and record it for a few minutes.
2. Connect the oscilloscope to video output with a 75-ohm termination.
3. Playback the just recorded portion.
4. Adjust VR3505 so that the cyan level becomes A = 0.65Vp-p +/- 0.03Vp-p as shown below.



3-3-18. FSC ADJ.

BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT
ADJ.	VC3601
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M. EQ	FREQUENCY COUNTER
SPEC.	3.554687MHz +/- 40Hz

1. Supply the Colour bar signal to VIDEO INPUT and recording it for a few minutes.
2. Connect the waveform monitor to the video out.
3. Playback the just recorded portion.
4. Adjust VC3601 so that the frequency is 3.554687MHz +/- 40Hz.

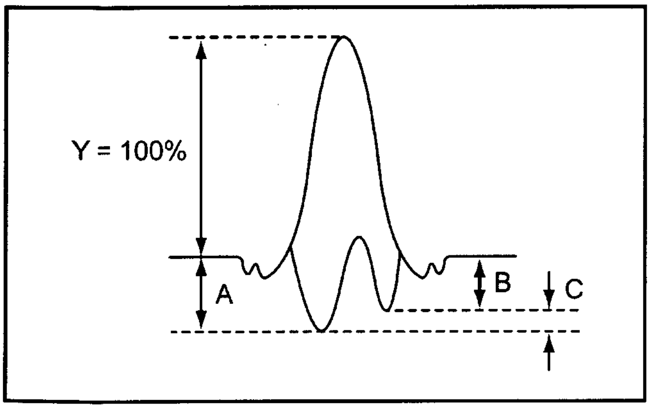
3-3-19. Y/C TIMING ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ.	VR3501
TAPE	S-VHS SELF RECORDED TAPE
INPUT	2T PULSE & BAR
MODE	SELF-REC/PLAY
M. EQ	OSCILLOSCOPE or WAVEFORM MONITOR
SPEC.	A = B (0ns +/- 50ns) Y = 100%, C = "Y" Les than 3%

[SET UP]

EDIT SW : OFF
NOTCH : OFF

1. Supply a 2T Pulse and Bar signal to the VIDEO INPUT.
2. Insert an S-VHS tape and make S-VHS recording for few minutes.
3. Connect the Waveform Monitor to the Video Line Output.
4. Play back the portion just recorded in step 3.
5. Adjust VR3501 so that the level "C" is 3% against the level "Y" (100%) and level "A" and "B" is equal.



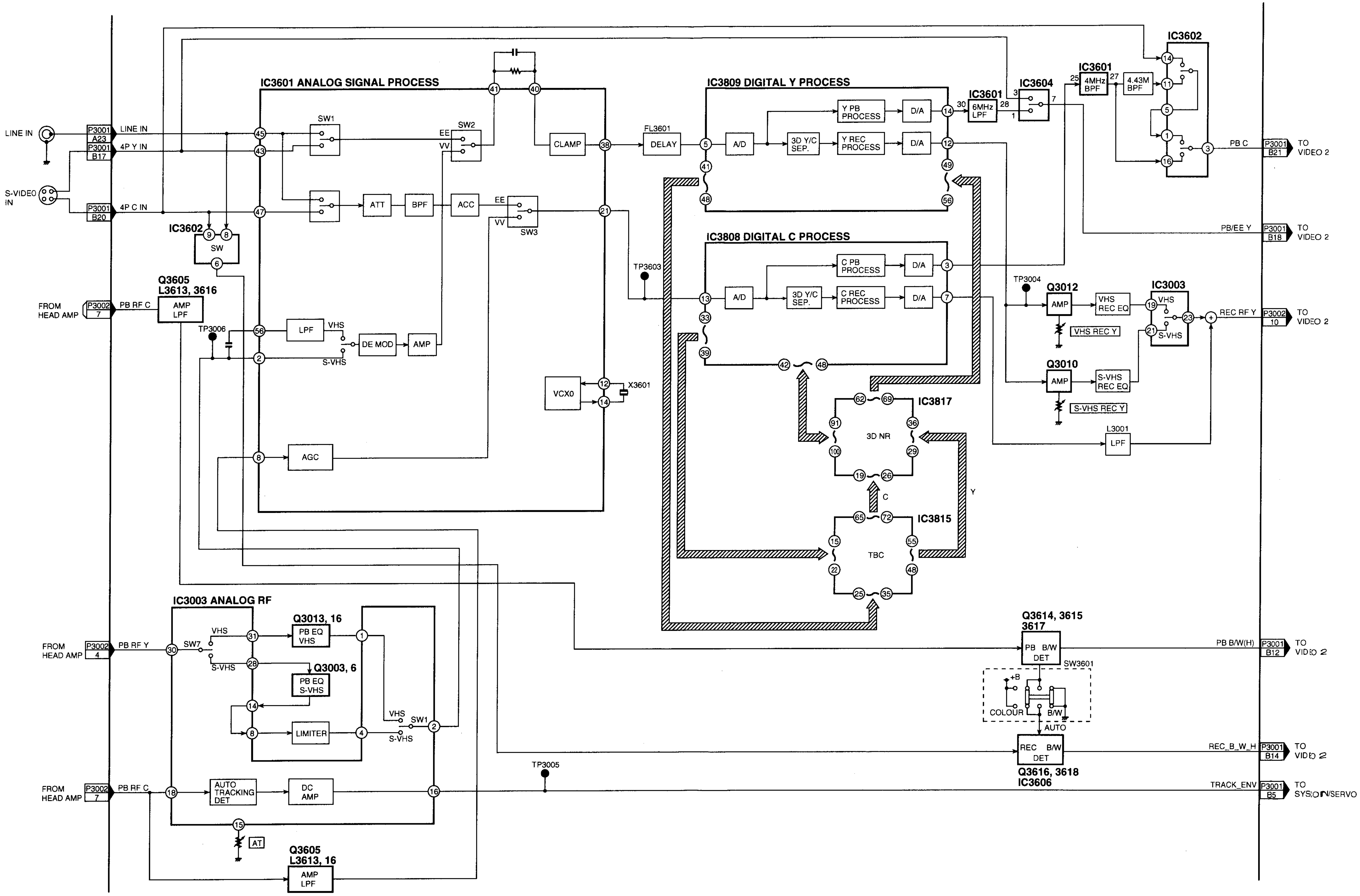
SECTION 4

BLOCK DIAGRAMS

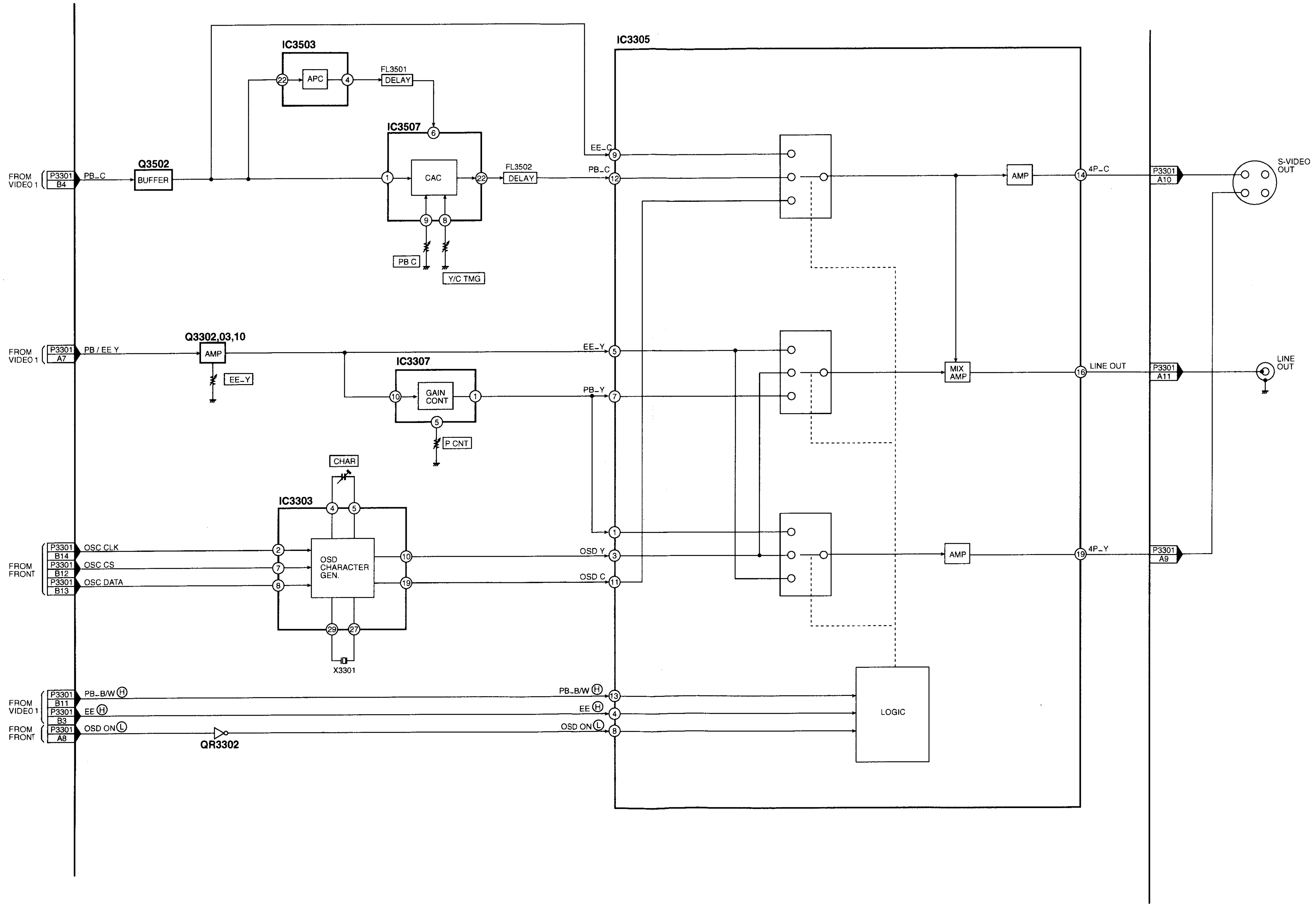
CONTENTS

VIDEO 1 BLOCK DIAGRAM BLK-1
VIDEO 2 BLOCK DIAGRAM BLK-2

VIDEO 1 C.B.A. BLOCK DIAGRAM


IC3601 ANALOG SIGNAL PROCESS
IC3809 DIGITAL Y PROCESS
IC3808 DIGITAL C PROCESS
IC3602
IC3601
IC3604
LINE IN
S-VIDEO IN
P3001 A23
P3001 B17
P3001 B20
LINE IN
4P Y IN
4P C IN
SW1
SW2
SW3
EE
VV
ATT
BPF
ACC
CLAMP
FL3601
DELAY
A/D
3D Y/C SEP.
Y PB PROCESS
Y REC PROCESS
C PB PROCESS
C REC PROCESS
D/A
6MHz LPF
4MHz BPF
4.43M BPF
PB C
P3001 B21
TO VIDEO 2
PB/EE Y
P3001 B18
TO VIDEO 2
IC3602
SW
Q3605
L3613, 3616
FROM HEAD AMP
P3002 7
PB RF C
AMP LPF
TP3006
TP3603
TP3004
LPF
VHS
S-VHS
DE MOD
AMP
VCXO
X3601
AGC
Q3012
AMP
VHS REC EQ
VHS REC Y
IC3003
VHS
S-VHS
REC RF Y
P3002 10
TO VIDEO 2
Q3010
AMP
S-VHS REC EQ
S-VHS REC Y
L3001
LPF
IC3817
3D NR
IC3815
TBC
C
Y
IC3003 ANALOG RF
FROM HEAD AMP
P3002 4
PB RF Y
SW7
VHS
S-VHS
Q3013, 16
PB EQ VHS
Q3003, 6
PB EQ S-VHS
LIMITER
VHS
SW1
S-VHS
Q3614, 3615
3617
PB B/W DET
SW3601
+B
COLOUR
B/W
AUTO
PB B/W(H)
P3001 B12
TO VIDEO 2
REC B/W DET
Q3616, 3618
IC3606
REC_B_W_H
P3001 B14
TO VIDEO 2
TP3005
FROM HEAD AMP
P3002 7
PB RF C
AUTO TRACKING DET
DC AMP
TRACK_ENV
P3001 B5
TO SYSCON/SERVO
AT
Q3605
L3613, 16
AMP LPF

VIDEO 2 C.B.A. BLOCK DIAGRAM

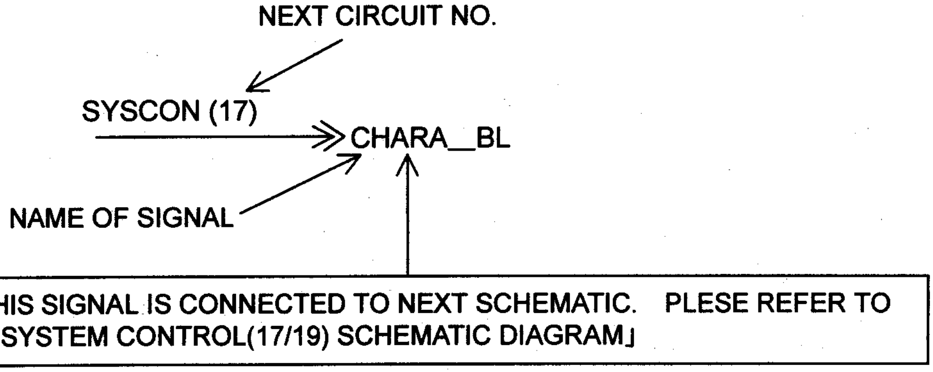

IC3503
APC
22
4
FL3501
DELAY
IC3507
6
CAC
1
22
9
8
PB C
Y/C TMG
FL3502
DELAY
Q3502
BUFFER
FROM VIDEO 1
P3301 B4
PB_C
IC3305
EE_C
9
PB_C
12
AMP
14
4P_C
P3301 A10
S-VIDEO OUT
FROM VIDEO 1
P3301 A7
PB / EE Y
Q3302,03,10
AMP
EE_Y
IC3307
10
GAIN CONT
1
5
P CNT
EE_Y
5
PB_Y
7
MIX AMP
16
LINE OUT
P3301 A11
LINE OUT
CHAR
IC3303
4
5
FROM FRONT
P3301 B14
OSC CLK
P3301 B12
OSC CS
P3301 B13
OSC DATA
2
7
8
OSD CHARACTER GEN.
10
19
29
27
X3301
1
OSD Y
3
OSD C
11
AMP
19
4P_Y
P3301 A9
FROM VIDEO 1
P3301 B11
PB_B/W Ⓗ
P3301 B3
EE Ⓗ
FROM FRONT
P3301 A8
OSD ON Ⓛ
QR3302
PB_B/W Ⓗ
13
EE Ⓗ
4
OSD ON Ⓛ
8
LOGIC

SECTION 5

SCHEMATIC DIAGRAMS, CIRCUIT BOARD DIAGRAMS

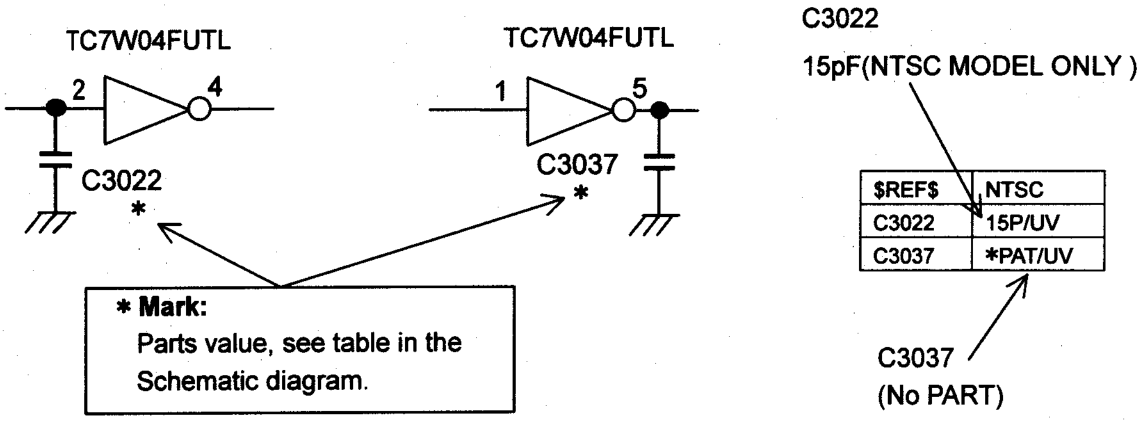
NOTE

(EX 1)



THIS SIGNAL IS CONNECTED TO NEXT SCHEMATIC. PLESE REFER TO 「SYSTEM CONTROL(17/19) SCHEMATIC DIAGRAM」

(EX 2)



C3022
15pF(NTSC MODEL ONLY)

*** Mark:**
Parts value, see table in the Schematic diagram.

REF	NTSC
C3022	15P/UV
C3037	*PAT/UV

C3037
(No PART)

IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WASPREPARED.

⚠ CAUTION

THE ▭ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

CONTENTS

INTERCONNECTION SCM001

MOTHER..SCM002

VIDEO 1 ....SCM003

VIDEO 2 ....SCM007

SYSCON SCM010

REEL SERVO SCM011

SERVO..SCM012

MOTOR DRIVE 1 ....SCM013

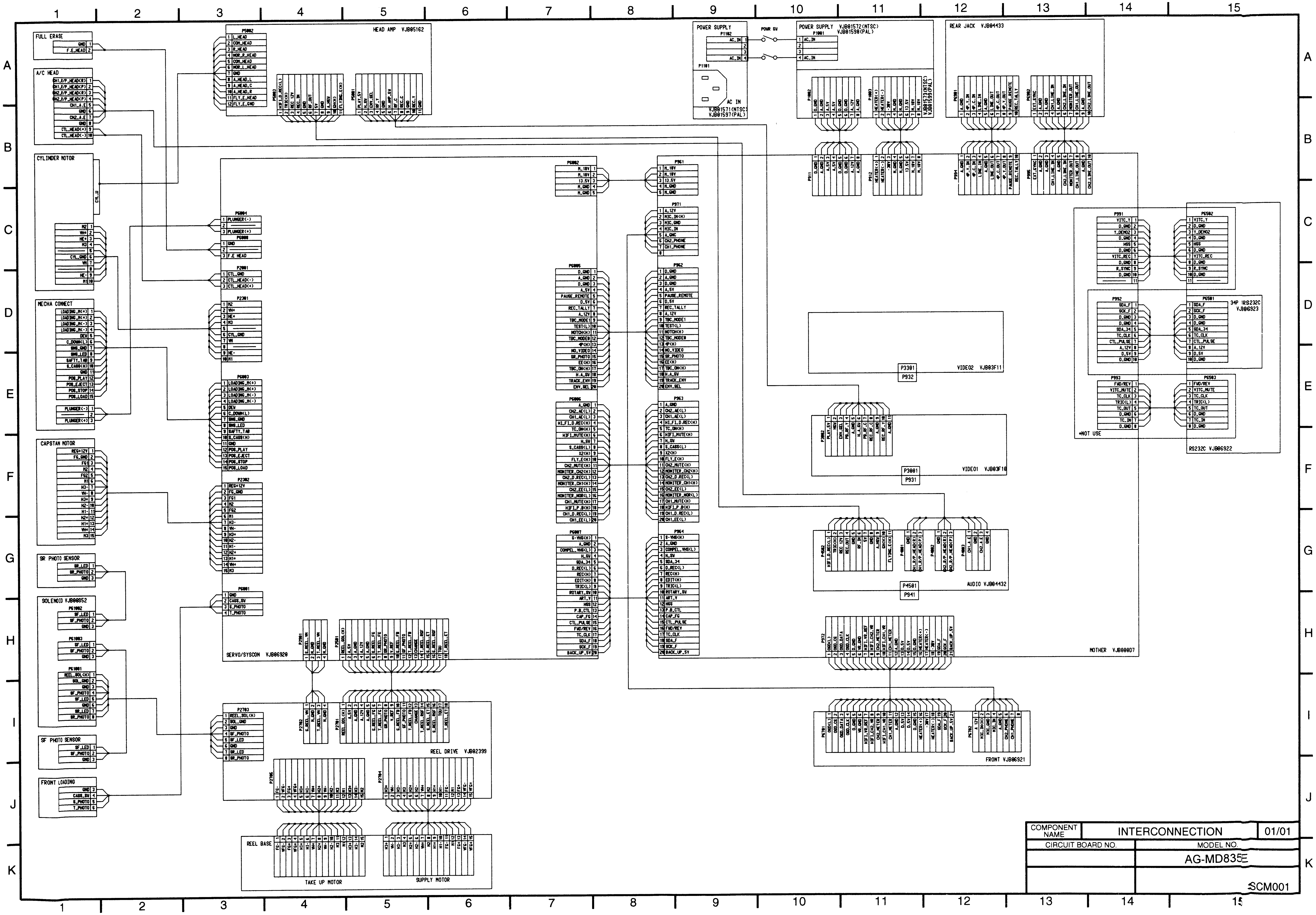
DC-DC..SCM014

CONNECTION SCM015

SYSTEM CONTROL & SERVO P.C.BOARD (VEP06D28B)..CBA-1

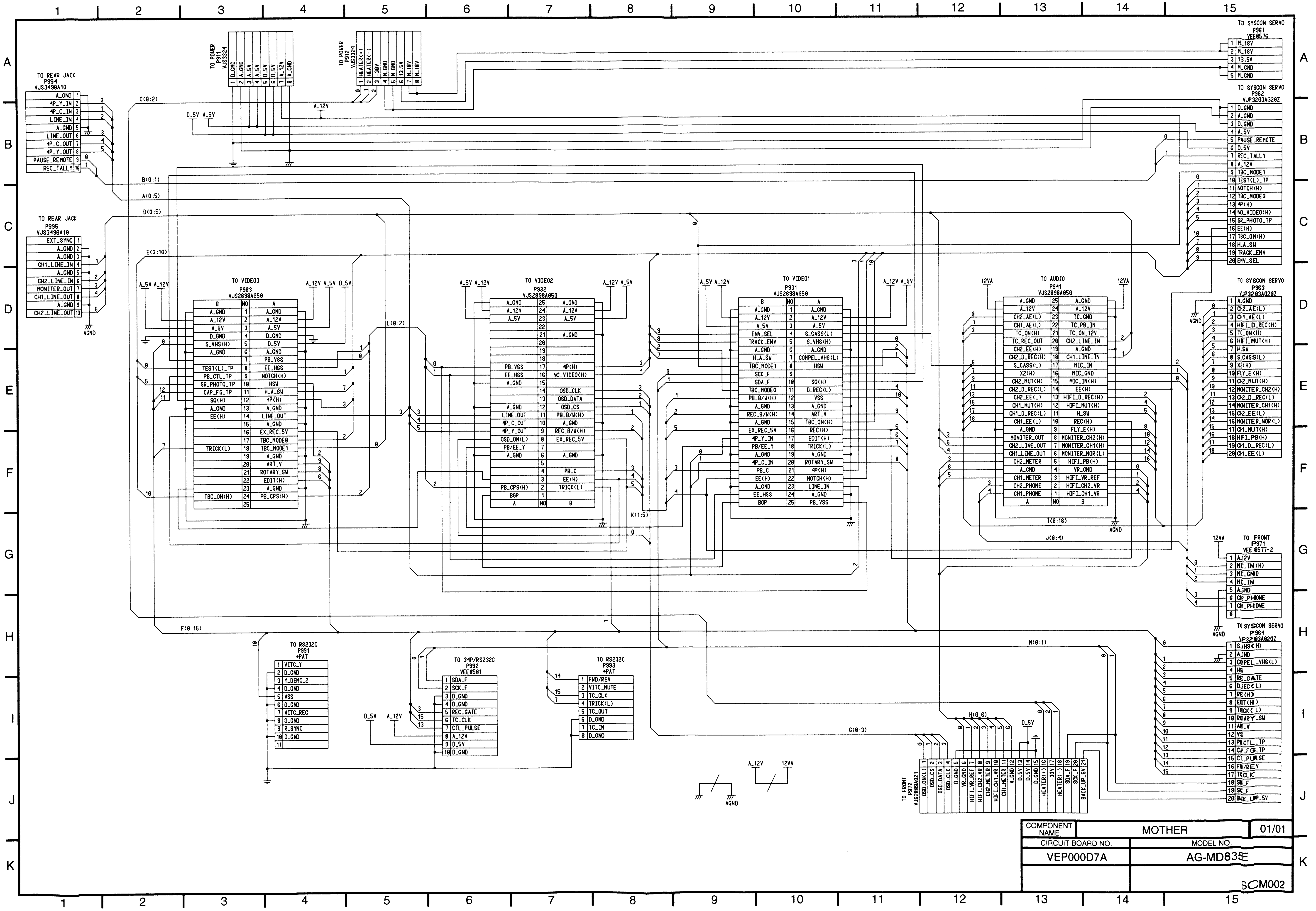
VIDEO 1 P.C.BOARD (VEP03F35A)..CBA-3

VIDEO 2 P.C.BOARD (VEP03F36A)..CBA-5


FULL ERASE
A/C HEAD
CYLINDER MOTOR
MECHA CONNECT
CAPSTAN MOTOR
SR PHOTO SENSOR
SOLENOID VJB08852
SF PHOTO SENSOR
FRONT LOADING
HEAD AMP VJB05162
P5002
P5003
P5001
SERVO/SYSCON VJB06920
P6004
P6008
P2001
P2301
P6003
P2302
P6001
P2901
P2501
P2703
P2702
P2701
REEL DRIVE VJB02399
P2705
P2704
REEL BASE
TAKE UP MOTOR
SUPPLY MOTOR
P6002
P6005
P6006
P6007
P961
P971
P962
P963
P964
POWER SUPPLY
P1102
POWR SW
P1101
AC IN
VJB01571(NTSC)
VJB01597(PAL)
POWER SUPPLY VJB01572(NTSC)
VJB01598(PAL)
P1001
P1002
P1003
P911
P912
REAR JACK VJB04433
P2901
P2902
P994
P995
VIDEO2 VJB03F11
P3301
P932
P3002
VIDEO1 VJB03F10
P3001
P931
P4502
P4001
P4002
P4003
AUDIO VJB04432
P4501
P941
P972
MOTHER VJB08807
P6701
P6702
FRONT VJB06921
P991
P992
P993
P6502
P6501
P6503
34P RS232C
VJB06923
*NOT USE
RS232C VJB06922
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

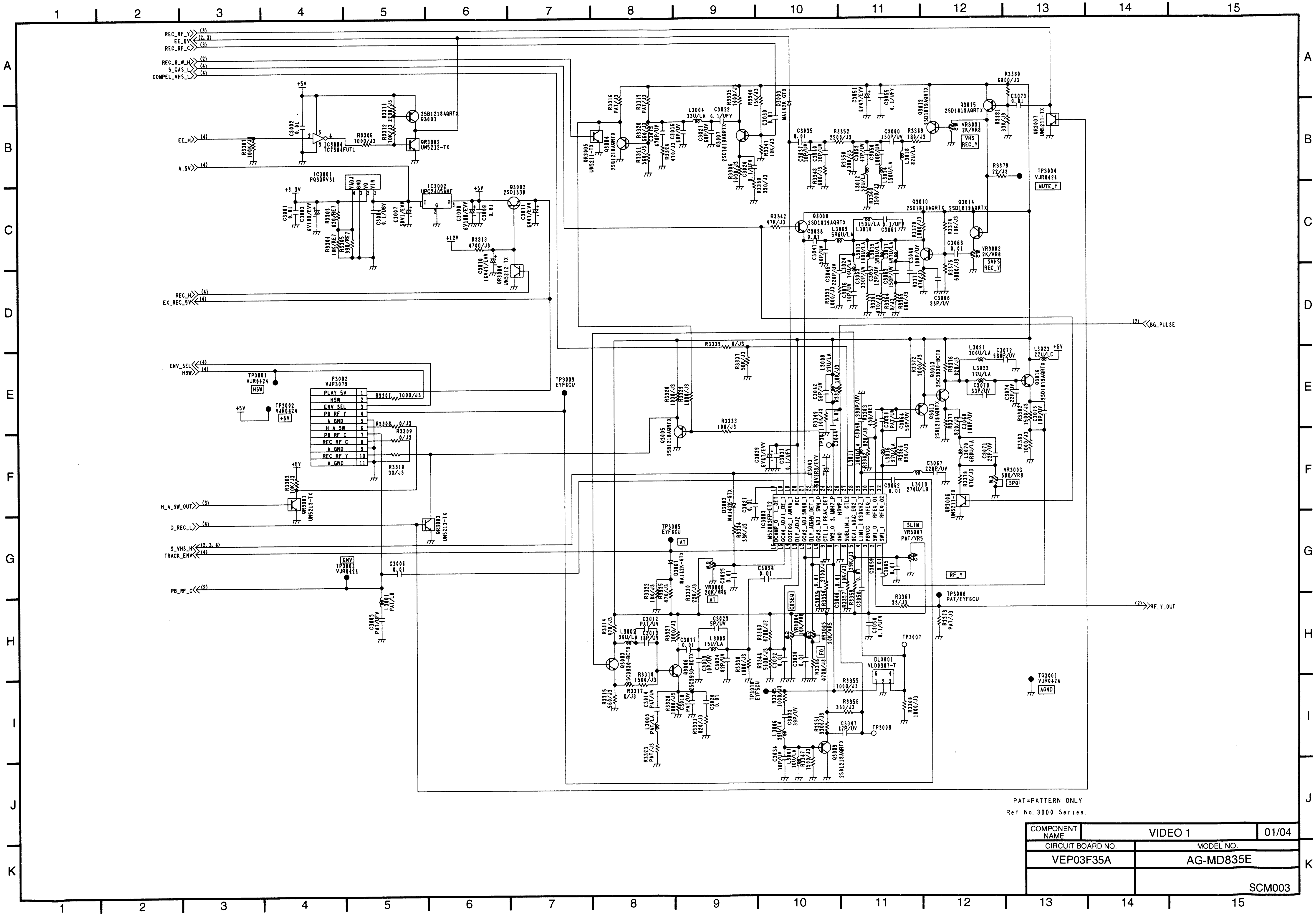
COMPONENT NAME	INTERCONNECTION	01/01
CIRCUIT BOARD NO.	MODEL NO.	
	AG-MD835E	

SCM001


TO POWER P911 VJS3324
TO POWER P912 VJS3324
TO REAR JACK P994 VJS3490A10
TO REAR JACK P995 VJS3490A10
TO VIDEO3 P983 VJS2898A050
TO VIDEO2 P932 VJS2898A050
TO VIDEO1 P931 VJS2898A050
TO AUDIO P941 VJS2898A050
TO SYSCON SERVO P961 VEE8576
TO SYSCON SERVO P962 VJP3203A020Z
TO SYSCON SERVO P963 VJP3203A020Z
TO FRONT P971 VEE8577-2
TO SYSCON SERVO P964 VJP3203A020Z
TO RS232C P991 *PAT
TO 34P/RS232C P992 VEE8581
TO RS232C P993 *PAT
TO FRONT P972 VJS2898A021
B(0:1)
A(0:5)
C(0:2)
D(0:5)
E(0:10)
F(0:15)
G(0:3)
H(0:6)
I(0:18)
J(0:4)
K(1:5)
L(0:2)
M(0:1)
A_12V
12VA
D_5V
A_5V
AGND

COMPONENT NAME	MOTHER	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP000D7A	AG-MD835E	

SCM002

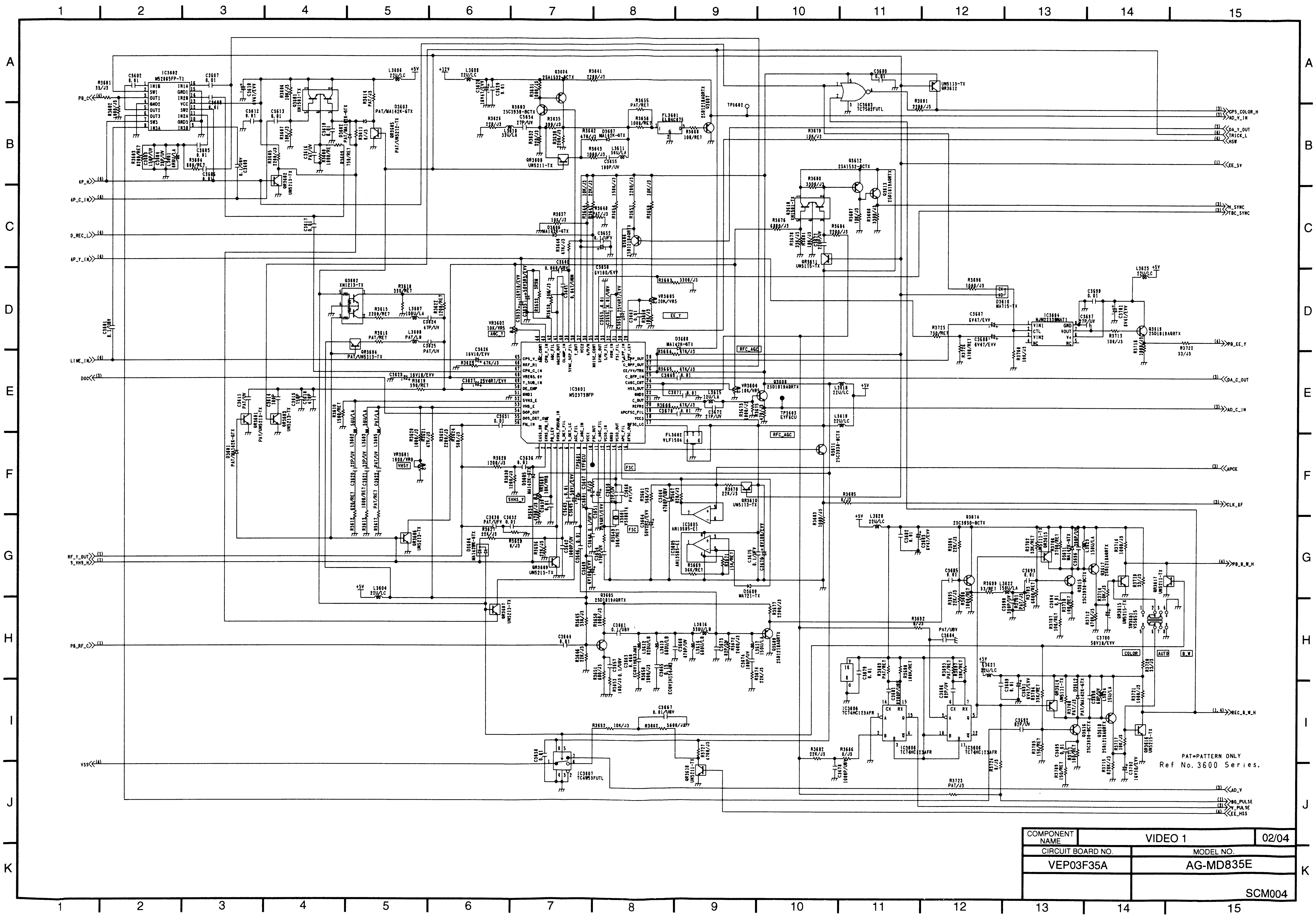

REC_RF_Y
EE_5V
REC_RF_C
REC_B_W_H
S_CAS_L
COMPEL_VHS_L
EE_H
A_5V
REC_H
EX_REC_5V
ENV_SEL
HSW
H_A_SW_OUT
D_REC_L
S_VHS_H
TRACK_ENV
PB_RF_C
BG_PULSE
RF_Y_OUT
IC3001 PQ30RV31
IC3002 UPC2405AHF
IC3004 TC7S04FUTL
IC3003 M52083FP-E2
P3002 VJP3079
PLAY 5V
HSW
ENV SEL
PB RF Y
A GND
H A SW
PB RF C
REC RF C
A GND
REC RF Y
A GND
TP3001 VJR0424
TP3002 VJR0424
TP3003 VJR0424
TP3004 VJR0424
TP3005 EYF6CU
TP3006 PAT/EYF6CU
TP3007
TP3008
TP3009 EYF6CU
TP3010 EYF6CU
TG3001 VJR0424
DL3001 VLD0387-T
VR3001 2K/VR8
VR3002 2K/VR8
VR3003 500/VR8
VR3006 20K/VR5
VR3007 PAT/VR5
MUTE_Y
VHS REC_Y
SVHS REC_Y
SLIM
RF_Y
SPQ
AT
CDSEQ
FO
ENV
+5V
HSW
AGND

PAT=PATTERN ONLY

Ref No. 3000 Series.

COMPONENT NAME	VIDEO 1	01/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F35A	AG-MD835E	

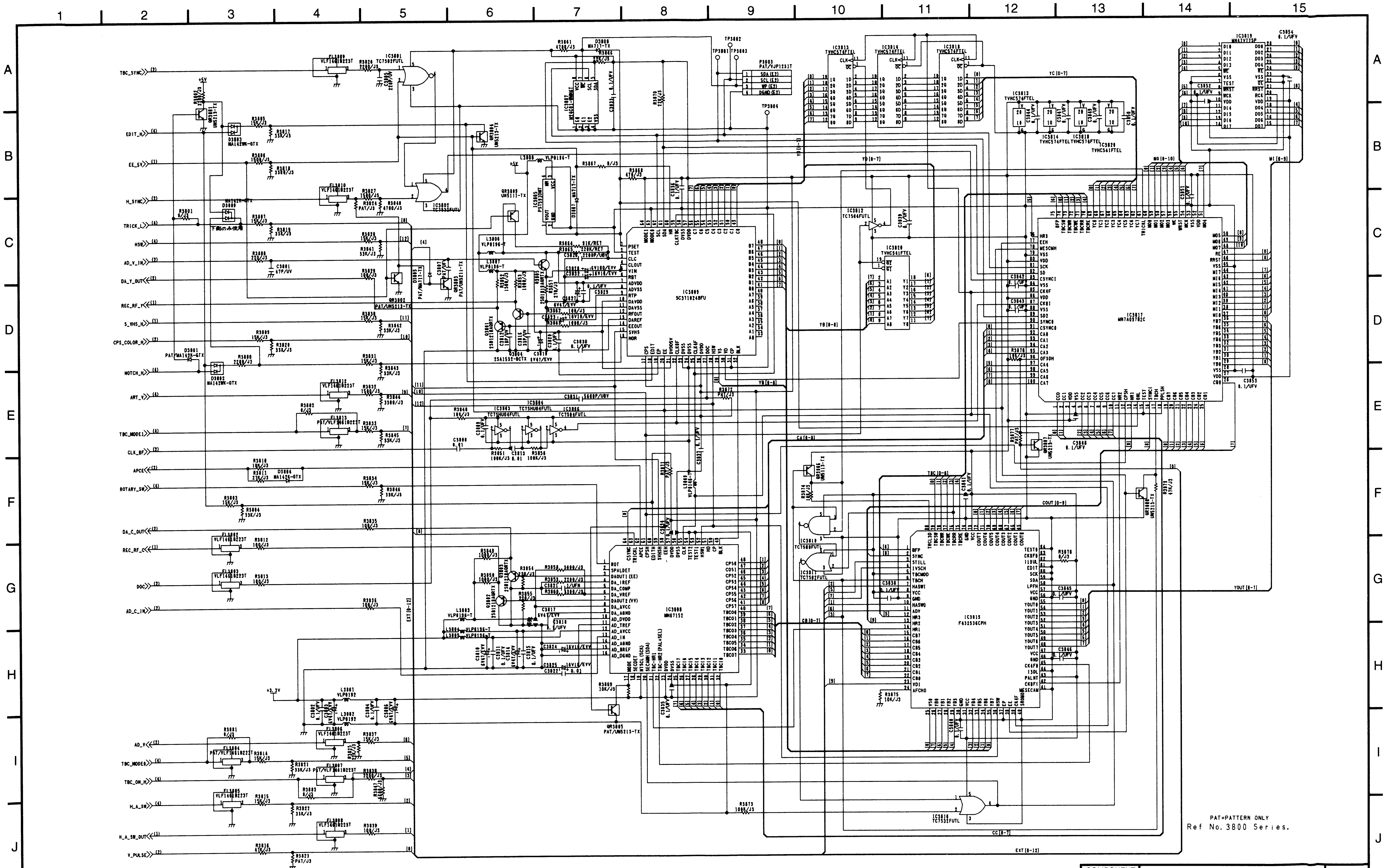
SCM003


IC3602 M52065FP-T1
IC3601 M52373BFP
IC3603 TC7S02FUTL
IC3604 NJM2233BMAT1
IC3605 AN1358S-E1
IC3606 TC74HC123AFR
IC3607 TC4W53FUTL
PB_C
4P_H
4P_C_IN
D_REC_L
4P_Y_IN
LINE_IN
DOC
RF_Y_OUT
S_VHS_H
PB_RF_C
VSS
CPS_COLOR_H
AD_V_IN
DA_Y_OUT
TRICK_L
HSW
EE_SY
H_SYNC
TBC_SYNC
PB_EE_Y
DA_C_OUT
AD_C_IN
APCE
CLK_8F
PB_B_W_H
REC_B_W_H
AD_V
BG_PULSE
V_PULSE
EE_HSS
+5V
+12V
EE_Y
RFC_AGC
FSC
SVHS_Y
VHSY
AGC_Y
COLOR
AUTO
B_W
TP1602
TP3603
FL3601
FL3602
VR3601
VR3602
VR3604
VR3605

PAT=PATTERN ONLY
Ref No. 3600 Series.

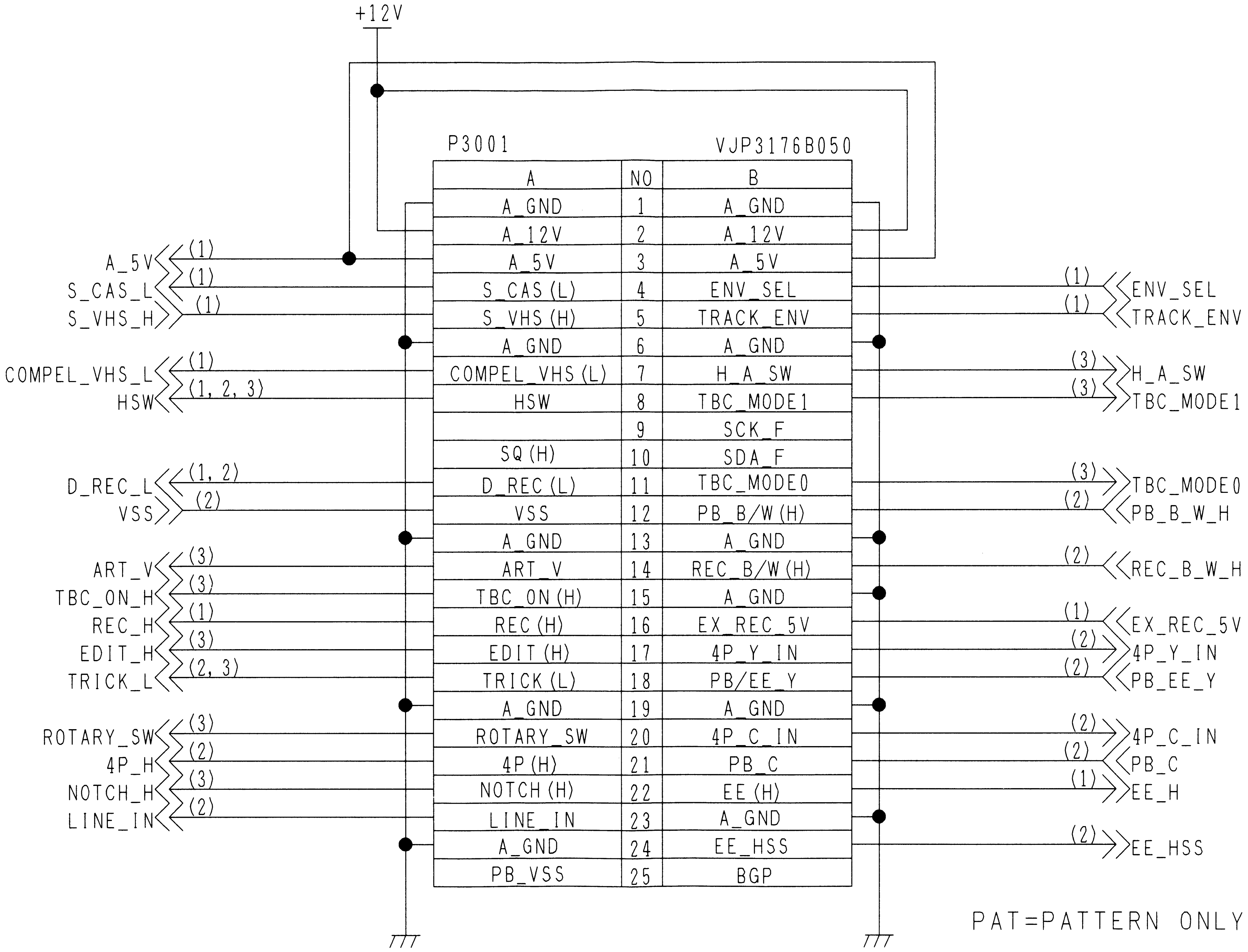
COMPONENT NAME	VIDEO 1	02/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F35A	AG-MD835E	

SCM004


TBC_SYNC
EDIT_H
EE_SV
H_SYNC
TRICK_L
HSW
AD_V_IN
DA_Y_OUT
REC_RF_Y
S_VHS_H
CPS_COLOR_H
NOTCH_H
ART_V
TBC_MODE1
CLK_BF
APCE
ROTARY_SW
DA_C_OUT
REC_RF_C
DOC
AD_C_IN
AD_V
TBC_MODE0
TBC_ON_H
H_A_SW
H_A_SW_OUT
V_PULSE
IC3805 SC371024BFU
IC3808 MN67152
IC3815 F632536CPH
IC3817 MN7A03782C
YC[0-7]
YD[0-7]
YB[0-8]
CA[0-8]
CB[0-11]
CC[0-7]
COUT[0-9]
TBC[0-8]
EXT[0-12]
YOUT[0-7]

PAT=PATTERN ONLY
Ref No. 3800 Series.

COMPONENT NAME	VIDEO 1	03/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F35A	AG-MD835E	
	SCM005	


+12V
A_5V (1)
S_CAS_L (1)
S_VHS_H (1)
COMPEL_VHS_L (1)
HSW (1, 2, 3)
D_REC_L (1, 2)
VSS (2)
ART_V (3)
TBC_ON_H (3)
REC_H (1)
EDIT_H (3)
TRICK_L (2, 3)
ROTARY_SW (3)
4P_H (2)
NOTCH_H (3)
LINE_IN (2)
(1) ENV_SEL
(1) TRACK_ENV
(3) H_A_SW
(3) TBC_MODE1
(3) TBC_MODE0
(2) PB_B_W_H
(2) REC_B_W_H
(1) EX_REC_5V
(2) 4P_Y_IN
(2) PB_EE_Y
(2) 4P_C_IN
(2) PB_C
(1) EE_H
(2) EE_HSS

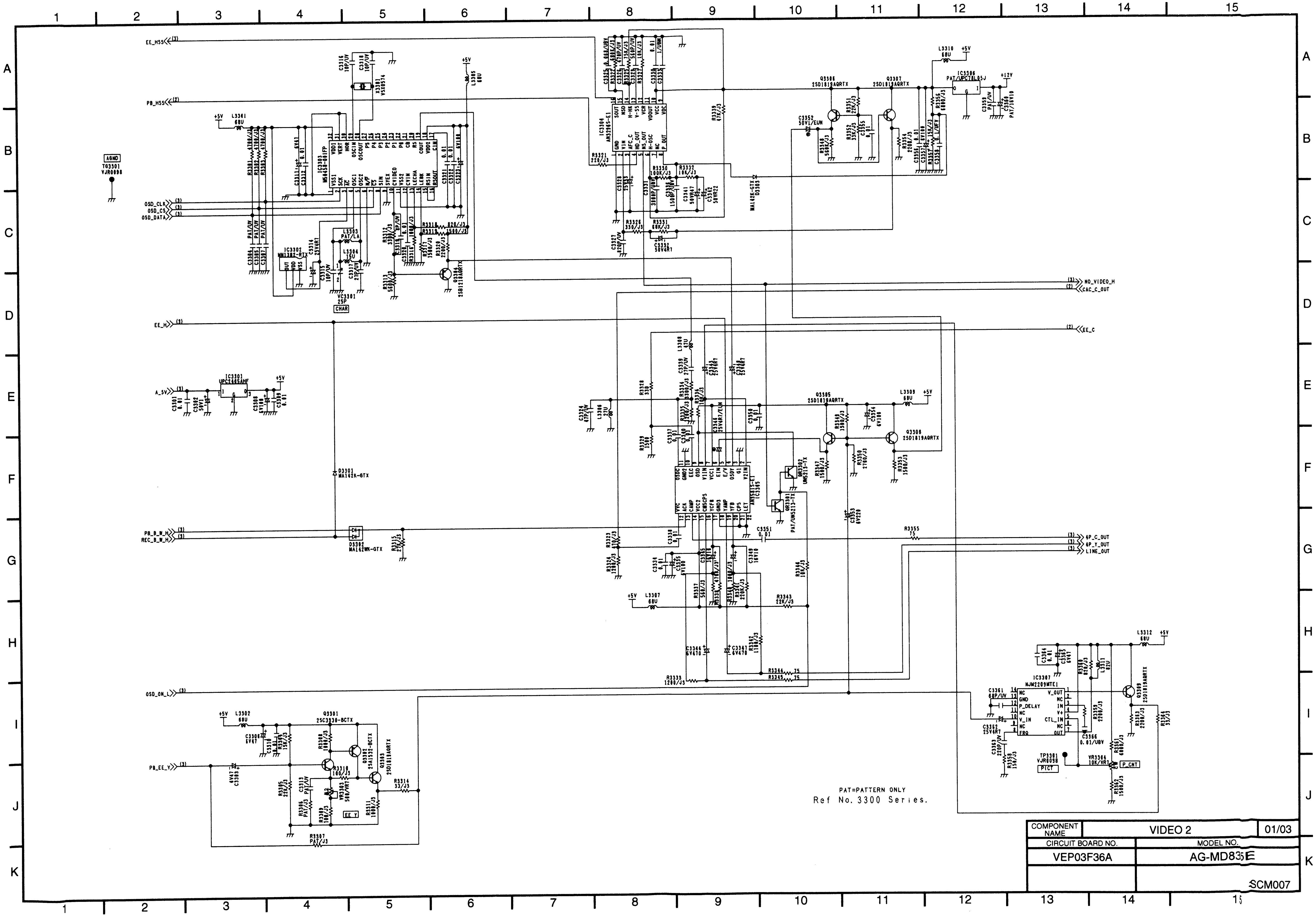
P3001 VJP3176B050

A	NO	B
A_GND	1	A_GND
A_12V	2	A_12V
A_5V	3	A_5V
S_CAS(L)	4	ENV_SEL
S_VHS(H)	5	TRACK_ENV
A_GND	6	A_GND
COMPEL_VHS(L)	7	H_A_SW
HSW	8	TBC_MODE1
	9	SCK_F
SQ(H)	10	SDA_F
D_REC(L)	11	TBC_MODE0
VSS	12	PB_B/W(H)
A_GND	13	A_GND
ART_V	14	REC_B/W(H)
TBC_ON(H)	15	A_GND
REC(H)	16	EX_REC_5V
EDIT(H)	17	4P_Y_IN
TRICK(L)	18	PB/EE_Y
A_GND	19	A_GND
ROTARY_SW	20	4P_C_IN
4P(H)	21	PB_C
NOTCH(H)	22	EE(H)
LINE_IN	23	A_GND
A_GND	24	EE_HSS
PB_VSS	25	BGP

PAT=PATTERN ONLY

Ref No. 3000 Series.

COMPONENT NAME	VIDEO 1	04/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F35A	AG-MD835E	
	SCM006	

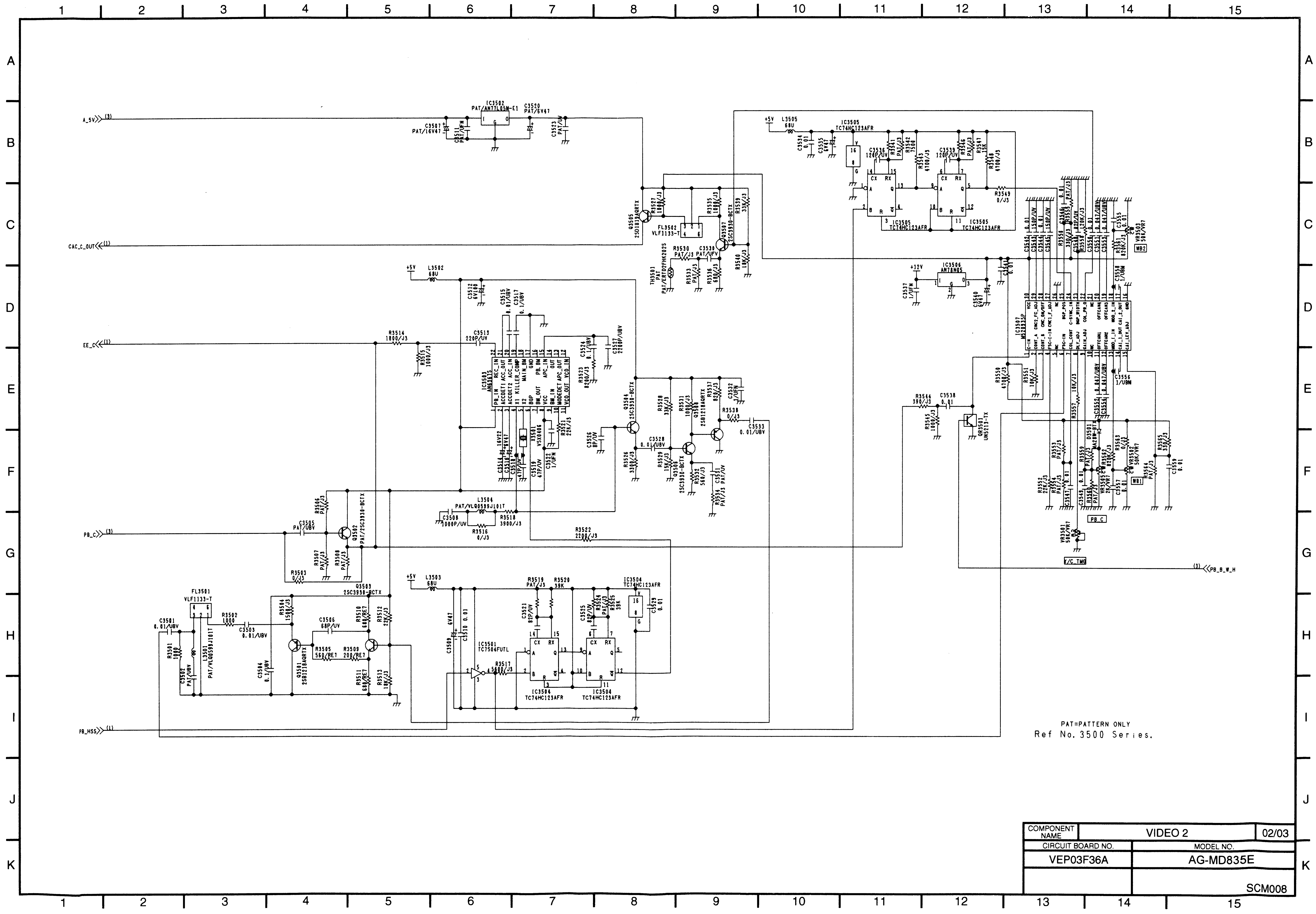

EE_HSS
PB_HSS
OSD_CLK
OSD_CS
OSD_DATA
EE_H
A_5V
PB_B_W_H
REC_B_W_H
OSD_ON_L
PB_EE_Y
NO_VIDEO_H
CAC_C_OUT
EE_C
4P_C_OUT
4P_Y_OUT
LINE_OUT
AGND
T03301
VJR0098
IC3303
M50458-001FP
IC3302
MM1382-RTX
IC3304
AN5296S-E1
IC3305
AN5815-E1
IC3306
PAT/UPC78L05J
IC3301
UPC2405AHF
IC3307
NJM2209MTE1
Q3301
2SC3330-BCTX
Q3302
2SA1532-BCTX
Q3303
2SD1819AQRTX
Q3304
2SD1819AQRTX
Q3305
2SD1819AQRTX
Q3306
2SD1819AQRTX
Q3307
2SD1819AQRTX
Q3308
2SD1819AQRTX
Q3309
2SD1819AQRTX
D3301
MA142K-GTX
D3302
MA142WK-GTX
D3303
MA142K-GTX
X3301
VSX0574
VC3301
25P
CHAR
EE_Y
TP3301
VJR0098
PICT
VR3304
10K/VR1
P_CNT
+5V
+12V

PAT=PATTERN ONLY
Ref No. 3300 Series.

COMPONENT NAME	VIDEO 2	01/03

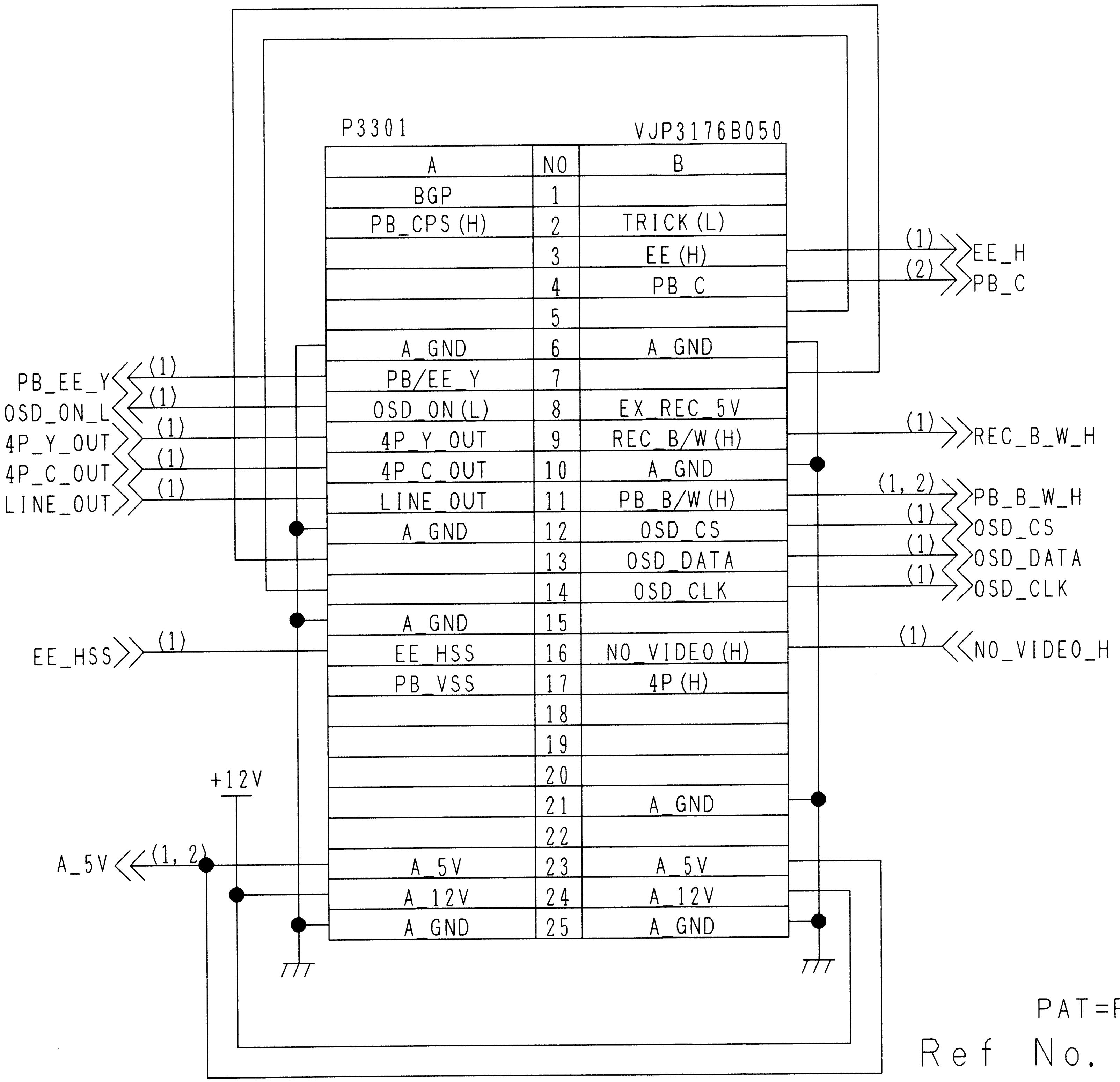
CIRCUIT BOARD NO.	MODEL NO.
VEP03F36A	AG-MD835E

SCM007


A_5V (3)
CAC_C_OUT (1)
EE_C (1)
PB_C (3)
PB_HSS (1)
PB_B_W_H (3)
IC3502 PAT/AN77L05M-E1
IC3505 TC74HC123AFR
IC3506 AN78M05
IC3507 M52083SP
IC3504 TC74HC123AFR
IC3501 TC7S04FUTL
Q3505 2SD1819AQRTX
Q3507 2SC3930-BCTX
Q3504 2SC3930-BCTX
Q3506 2SB1218AQRTX
Q3502 PAT/2SC3930-BCTX
Q3503 2SC3930-BCTX
Q3501 2SB1218AQRTX
QR3501 UN5213-TX
FL3502 VLF1133-T
FL3501 VLF1133-T
L3501 PAT/VLQ0599J101T
L3504 PAT/VLQ0599J101T
TH3501 PAT PAT/ERTD2FHK202S
+5V
+12V
WB1
WB2
PB_C
F/C_TMG

PAT=PATTERN ONLY
Ref No. 3500 Series.

COMPONENT NAME	VIDEO 2	02/03
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F36A	AG-MD835E	
	SCM008	


P3301
VJP3176B050
PB_EE_Y (1)
OSD_ON_L (1)
4P_Y_OUT (1)
4P_C_OUT (1)
LINE_OUT (1)
EE_HSS (1)
A_5V (1, 2)
+12V
(1) EE_H
(2) PB_C
(1) REC_B_W_H
(1, 2) PB_B_W_H
(1) OSD_CS
(1) OSD_DATA
(1) OSD_CLK
(1) NO_VIDEO_H

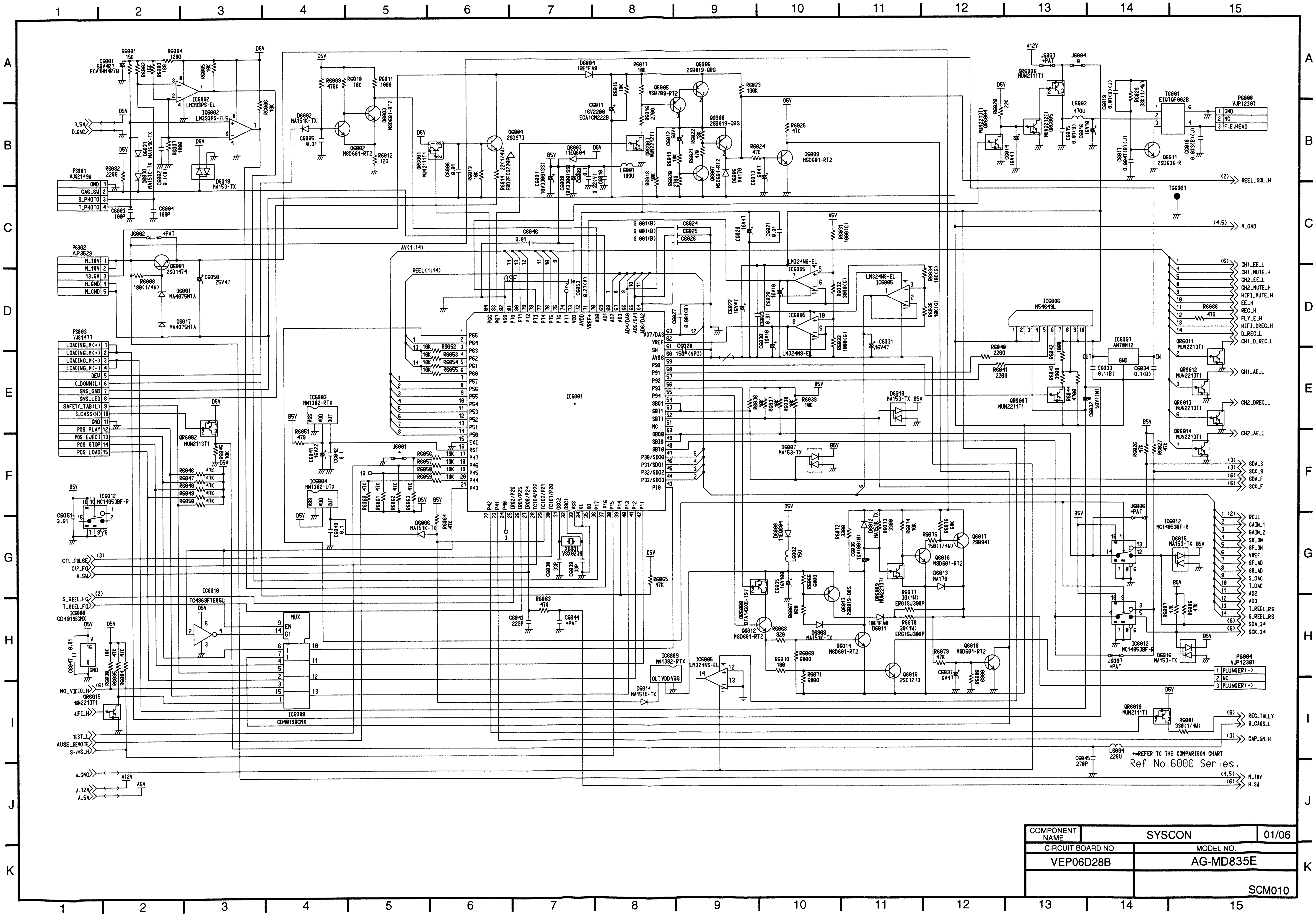
A	NO	B
BGP	1	
PB_CPS(H)	2	TRICK(L)
	3	EE(H)
	4	PB_C
	5	
A_GND	6	A_GND
PB/EE_Y	7	
OSD_ON(L)	8	EX_REC_5V
4P_Y_OUT	9	REC_B/W(H)
4P_C_OUT	10	A_GND
LINE_OUT	11	PB_B/W(H)
A_GND	12	OSD_CS
	13	OSD_DATA
	14	OSD_CLK
A_GND	15	
EE_HSS	16	NO_VIDEO(H)
PB_VSS	17	4P(H)
	18	
	19	
	20	
	21	A_GND
	22	
A_5V	23	A_5V
A_12V	24	A_12V
A_GND	25	A_GND

PAT=PATTERN ONLY

Ref No. 3300 Series.

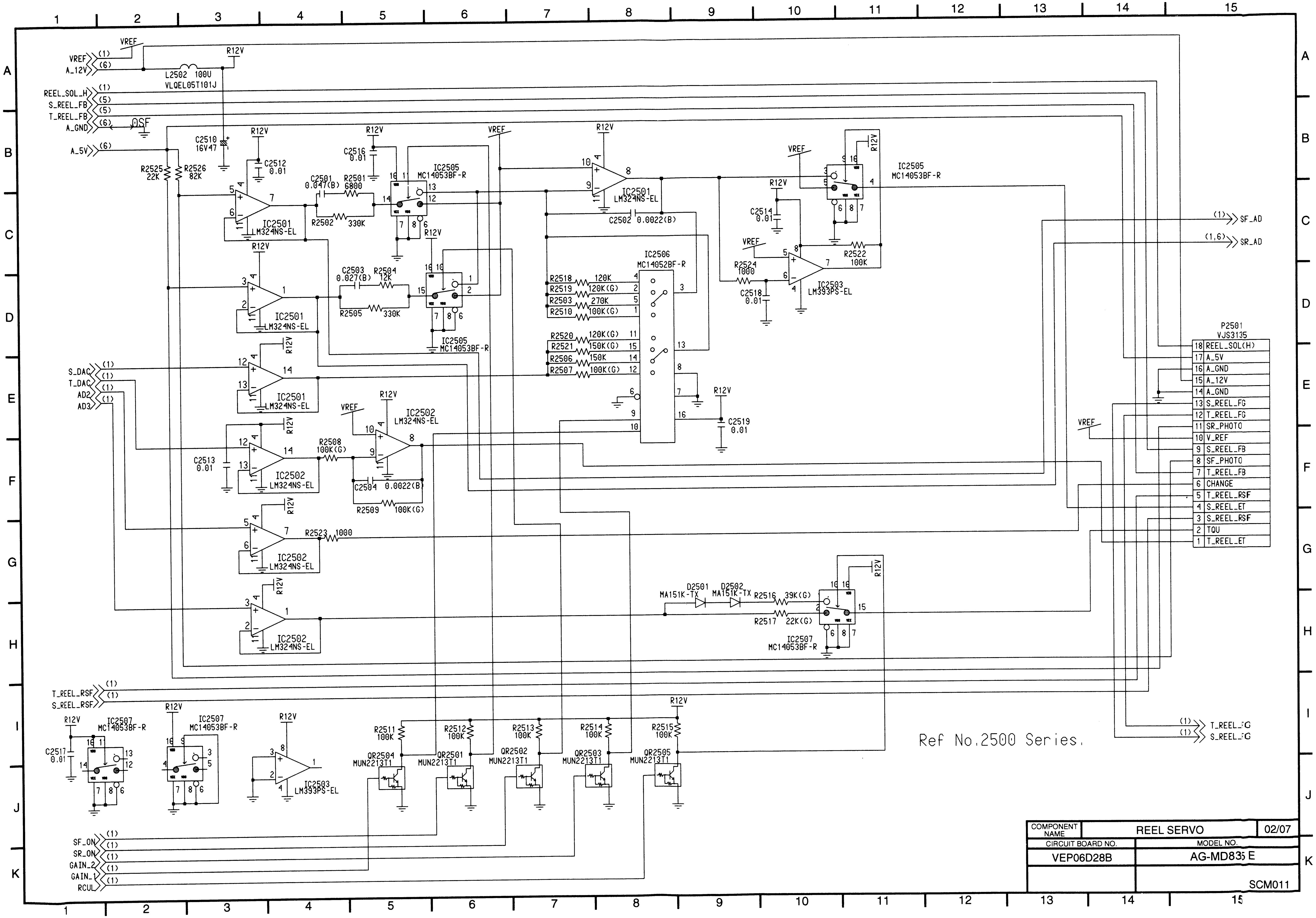
COMPONENT NAME	VIDEO 2	03/03
CIRCUIT BOARD NO.	MODEL NO.	
VEP03F36A	AG-MD835E	

SCM009


IC6001
IC6002 LM393PS-EL
IC6003 MN1382-RTX
IC6004 MN1382-UTX
IC6005 LM324NS-EL
IC6006 M54649L
IC6007 AN78M12
IC6008 CD4019BCMX
IC6009 MN1382-RTX
IC6010 TC4S69FTE85L
IC6012 MC14053BF-R
T6001 EIQ7QF002B
X6001 VSX0230
P6001 VJS2149W
P6002 VJP3529
P6003 VJS1477
P6004 VJP1230T
P6008 VJP1230T
GND
CAS_SW
S_PHOTO
T_PHOTO
M_18V
M_18V
13.5V
M_GND
M_GND
LOADING_M(+)
LOADING_M(+)
LOADING_M(-)
LOADING_M(-)
DEW
C_DOWN(L)
SNS_GND
SNS_LED
SAFETY_TAB(L)
S_CASS(H)
GND
POS PLAY
POS EJECT
POS STOP
POS LOAD
D_5V
D_GND
CTL_PULSE
CAP_FG
H_SW
S_REEL_FG
T_REEL_FG
NO_VIDEO_H
HIFI_H
TEST_L
AUSE_REMOTE
S-VHS_H
A_GND
A_12V
A_5V
REEL_SOL_H
M_GND
CH1_EE_L
CH1_MUTE_H
CH2_EE_L
CH2_MUTE_H
HIFI_MUTE_H
EE_H
REC_H
FLY_E_H
HIFI_DREC_H
D_REC_L
CH1_D_REC_L
CH1_AE_L
CH2_DREC_L
CH2_AE_L
SDA_S
SCK_S
SDA_F
SCK_F
RCUL
GAIN_1
GAIN_2
SR_ON
SF_ON
VREF
SF_AD
SR_AD
S_DAC
T_DAC
AD2
AD3
T_REEL_RS
S_REEL_RS
SDA_34
SCK_34
PLUNGER(-)
NC
PLUNGER(+)
F.E.HEAD
REC_TALLY
S_CASS_L
CAP_GN_H
M_18V
H.SW
AV(1:14)
REEL(1:14)
MUX
A12V
D5V
B5V
A5V
*=REFER TO THE COMPARISON CHART
Ref No.6000 Series.

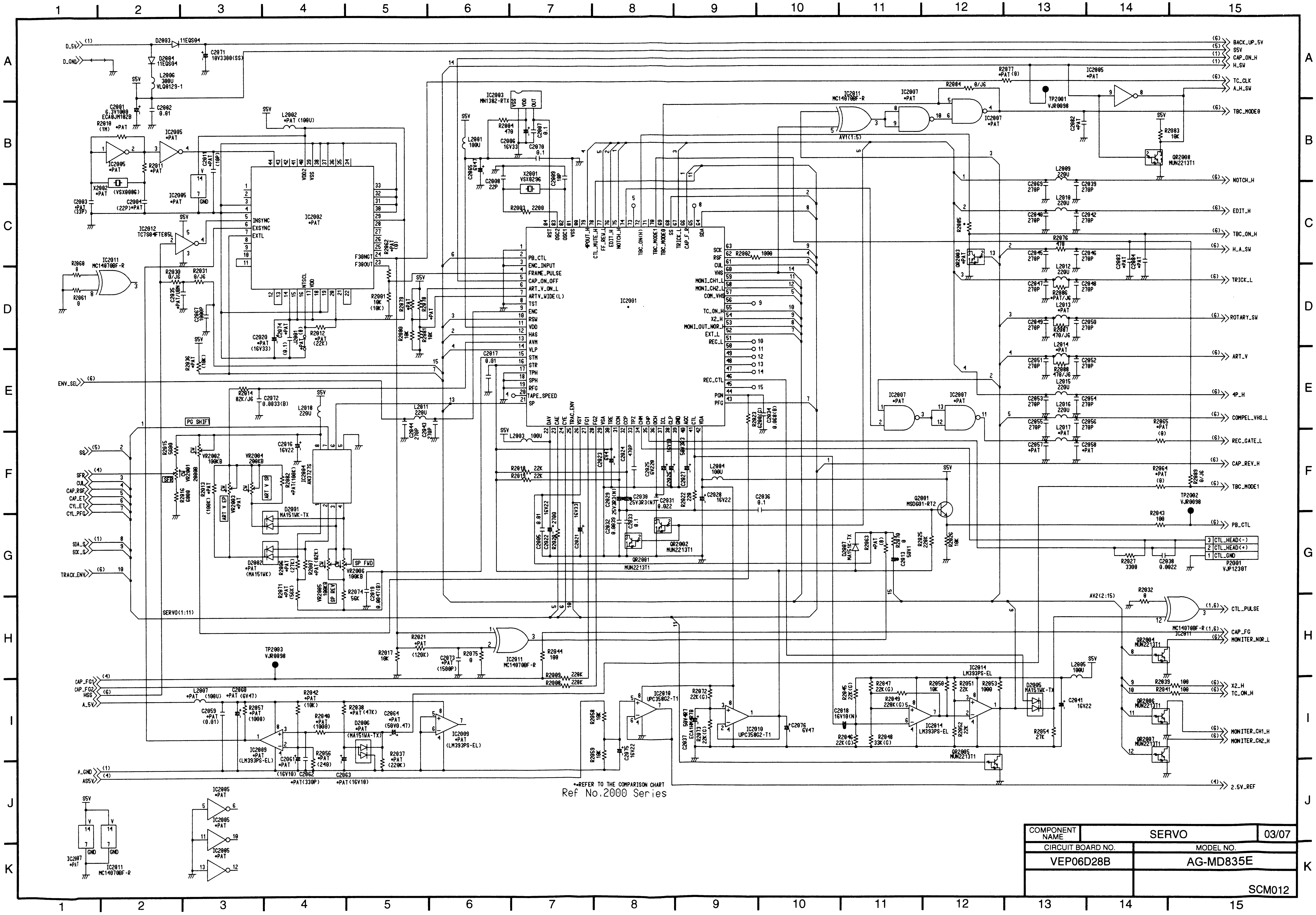
COMPONENT NAME	SYSCON	01/06
CIRCUIT BOARD NO.	MODEL NO.	
VEP06D28B	AG-MD835E	

SCM010


VREF (1)
A_12V (6)
L2502 100U
VLQEL05T101J
R12V
REEL_SOL_H (1)
S_REEL_FB (5)
T_REEL_FB (5)
A_GND (6)
OSF
A_5V (6)
C2510 16V47
R2525 22K
R2526 82K
C2512 0.01
C2516 0.01
C2501 0.047(B)
R2501 6800
R2502 330K
IC2505 MC14053BF-R
IC2501 LM324NS-EL
C2503 0.027(B)
R2504 12K
R2505 330K
VREF
C2502 0.0022(B)
IC2506 MC14052BF-R
R2518 120K
R2519 120K(G)
R2503 270K
R2510 100K(G)
R2520 120K(G)
R2521 150K(G)
R2506 150K
R2507 100K(G)
C2519 0.01
C2514 0.01
R2524 1000
C2518 0.01
R2522 100K
IC2503 LM393PS-EL
(1) SF_AD
(1,6) SR_AD
S_DAC (1)
T_DAC (1)
AD2 (1)
AD3 (1)
IC2502 LM324NS-EL
R2508 100K(G)
C2513 0.01
C2504 0.0022(B)
R2509 100K(G)
R2523 1000
D2501 MA151K-TX
D2502 MA151K-TX
R2516 39K(G)
R2517 22K(G)
IC2507 MC14053BF-R
P2501 VJS3135
18 REEL_SOL(H)
17 A_5V
16 A_GND
15 A_12V
14 A_GND
13 S_REEL_FG
12 T_REEL_FG
11 SR_PHOTO
10 V_REF
9 S_REEL_FB
8 SF_PHOTO
7 T_REEL_FB
6 CHANGE
5 T_REEL_RSF
4 S_REEL_ET
3 S_REEL_RSF
2 TQU
1 T_REEL_ET
T_REEL_RSF (1)
S_REEL_RSF (1)
C2517 0.01
R2511 100K
R2512 100K
R2513 100K
R2514 100K
R2515 100K
QR2504 MUN2213T1
QR2501 MUN2213T1
QR2502 MUN2213T1
QR2503 MUN2213T1
QR2505 MUN2213T1
(1) T_REEL_FG
(1) S_REEL_FG
SF_ON (1)
SR_ON (1)
GAIN_2 (1)
GAIN_1 (1)
RCUL (1)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

Ref No.2500 Series.

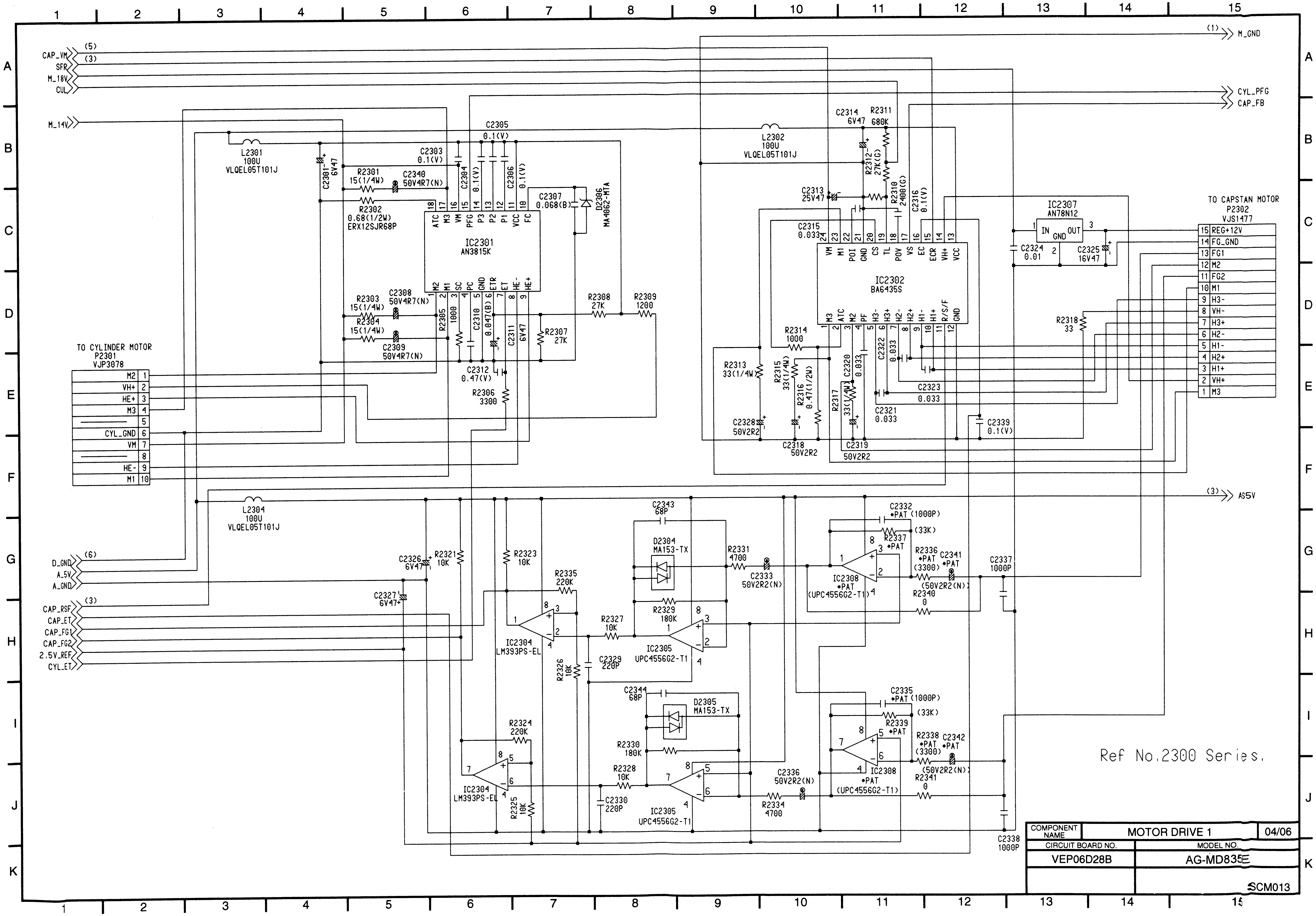
COMPONENT NAME	REEL SERVO	02/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP06D28B	AG-MD835E	
	SCM011	


IC2001
IC2002 *PAT
IC2003 MN1382-RTX
IC2004 AN3727S
IC2005 *PAT
IC2007 *PAT
IC2009 *PAT (LM393PS-EL)
IC2010 UPC358G2-T1
IC2011 MC14070BF-R
IC2012 TC7S04FTE85L
IC2014 LM393PS-EL
Q2001 MSD601-RT2
QR2001 MUN2213T1
QR2002 MUN2213T1
TP2001 VJR0098
TP2002 VJR0098
TP2003 VJR0098
P2001 VJP1230T
D_5V
D_GND
S5V
ENV_SEL
SS
SFR
CUL
CAP_RSF
CAP_ET
CYL_ET
CYL_PFG
SDA_S
SCK_S
TRACK_ENV
SERVO(1:11)
CAP_FG1
CAP_FG2
HSS
A_5V
A_GND
ASS
PG SHIFT
SFR
ART V SP
ART V EP
SP FWD
SP REV
BACK_UP_5V
S5V
CAP_ON_H
H_SW
TC_CLK
A_H_SW
TBC_MODE0
NOTCH_H
EDIT_H
TBC_ON_H
H_A_SW
TRICK_L
ROTARY_SW
ART_V
4P_H
COMPEL_VHS_L
REC_GATE_L
CAP_REV_H
TBC_MODE1
PB_CTL
CTL_HEAD(-)
CTL_HEAD(+)
CTL_GND
CTL_PULSE
CAP_FG
MONITER_NOR_L
X2_H
TC_ON_H
MONITER_CH1_H
MONITER_CH2_H
2.5V_REF
AV1(1:5)
AV2(2:15)

*=REFER TO THE COMPARISON CHART
Ref No.2000 Series

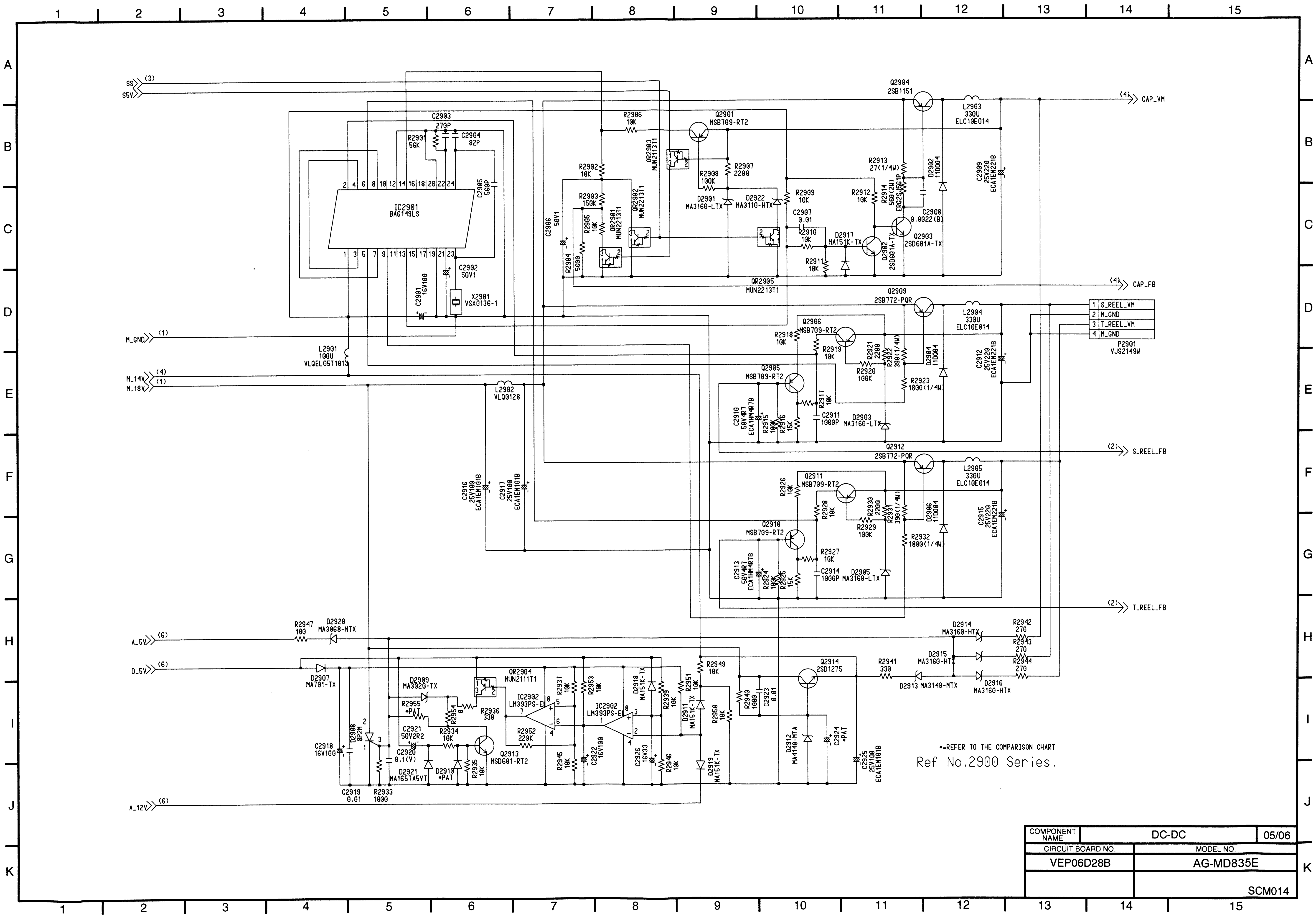
COMPONENT NAME	SERVO	03/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP06D28B	AG-MD835E	

SCM012


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
CAP_VM
SFR
M_18V
CUL
(5)
(3)
M_14V
(1)
M_GND
CYL_PFG
CAP_FB
L2301
100U
VLQEL05T101J
C2301
6V47
R2301
15(1/4W)
C2340
50V4R7(N)
R2302
0.68(1/2W)
ERX12SJR68P
C2303
0.1(V)
C2305
0.1(V)
C2304
0.1(V)
C2306
0.1(V)
C2307
0.068(B)
D2306
MA4062-MTA
IC2301
AN3815K
ATC
M3
VM
PFG
P3
P2
P1
VCC
FC
M2
M1
SC
PC
GND
ETR
ET
HE-
HE+
R2303
15(1/4W)
C2308
50V4R7(N)
R2304
15(1/4W)
C2309
50V4R7(N)
R2305
1000
C2310
0.047(B)
C2311
6V47
R2307
27K
R2308
27K
R2309
1200
C2312
0.47(V)
R2306
3300
TO CYLINDER MOTOR
P2301
VJP3078
M2
VH+
HE+
M3
CYL_GND
VM
HE-
M1
L2302
100U
VLQEL05T101J
C2314
6V47
R2311
680K
R2312
27K(G)
R2310
2400(G)
C2313
25V47
C2316
0.1(V)
C2315
0.033
IC2302
BA6435S
VM
M1
POI
GND
CS
TL
POV
VS
EC
ECR
VH+
VCC
M3
ATC
M2
PF
H3-
H3+
H2-
H2+
H1-
H1+
R/S/F
GND
IC2307
AN78N12
IN
GND
OUT
C2324
0.01
C2325
16V47
TO CAPSTAN MOTOR
P2302
VJS1477
REG+12V
FG_GND
FG1
M2
FG2
M1
H3-
VH-
H3+
H2-
H1-
H2+
H1+
VH+
M3
R2318
33
R2314
1000
R2313
33(1/4W)
R2315
33(1/4W)
R2316
0.47(1/2W)
R2317
33(1/4W)
C2320
0.033
C2322
0.033
C2323
0.033
C2321
0.033
C2328
50V2R2
C2318
50V2R2
C2319
50V2R2
C2339
0.1(V)
L2304
100U
VLQEL05T101J
(3)
A5V
D_GND
A_5V
A_GND
(6)
CAP_RSF
CAP_ET
CAP_FG1
CAP_FG2
2.5V_REF
CYL_ET
C2326
6V47
C2327
6V47
R2321
10K
R2323
10K
R2335
220K
IC2304
LM393PS-EL
R2327
10K
R2326
10K
C2329
220P
C2343
68P
D2304
MA153-TX
R2329
180K
IC2305
UPC4556G2-T1
R2331
4700
C2333
50V2R2(N)
C2332
*PAT(1000P)
R2337
*PAT
(33K)
IC2308
*PAT
(UPC4556G2-T1)
R2336
*PAT
(3300)
C2341
*PAT
(50V2R2(N))
R2340
0
C2337
1000P
C2344
68P
D2305
MA153-TX
R2330
180K
R2324
220K
R2328
10K
C2330
220P
R2325
10K
C2336
50V2R2(N)
R2334
4700
C2335
*PAT(1000P)
R2339
*PAT
(33K)
R2338
*PAT
(3300)
C2342
*PAT
(50V2R2(N))
R2341
0
C2338
1000P
Ref No.2300 Series.

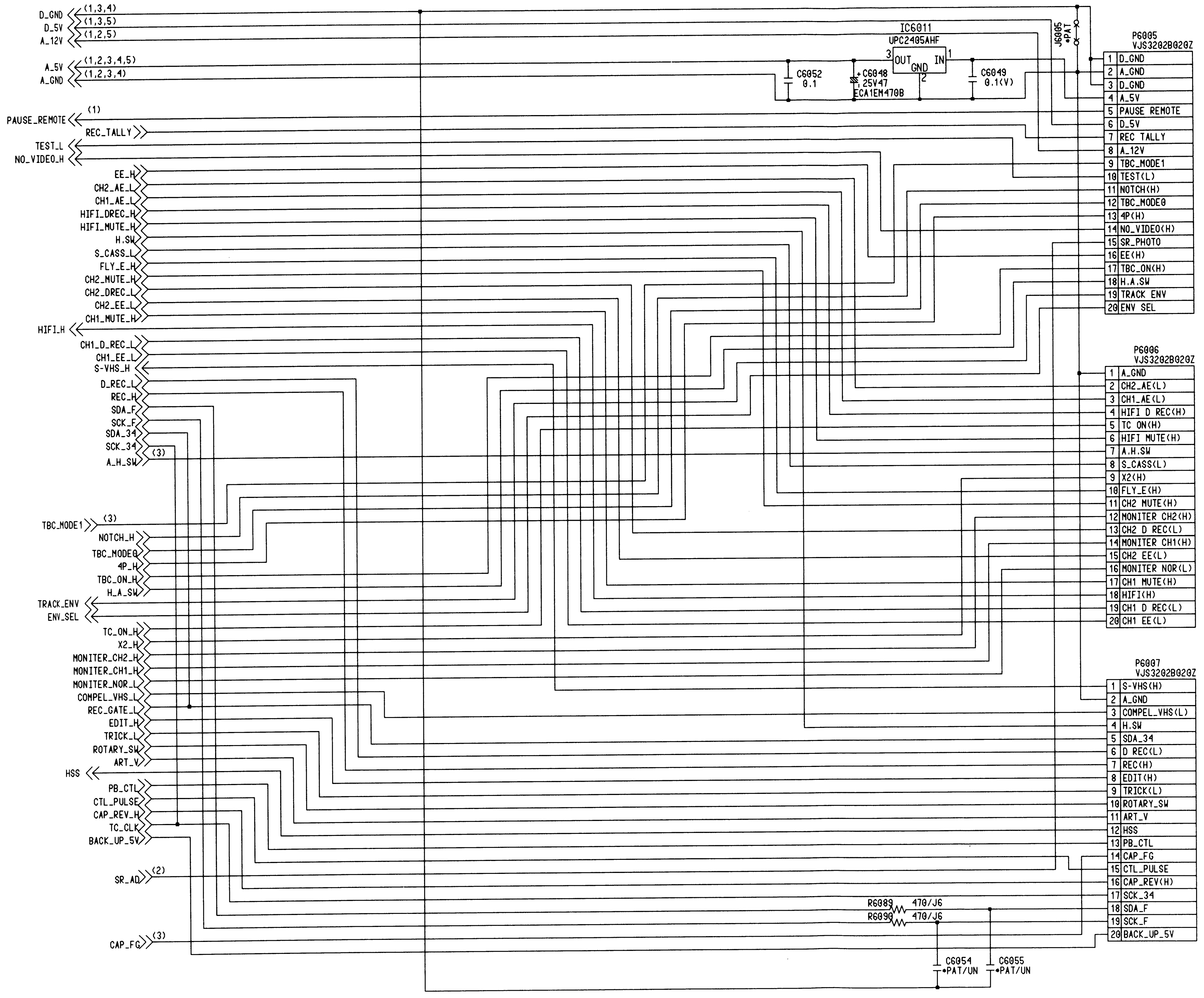
COMPONENT NAME	MOTOR DRIVE 1	04/06
CIRCUIT BOARD NO.	MODEL NO.	
VEP06D28B	AG-MD835E	

SCM013


SS (3)
S5V
M_GND (1)
M_14V (4)
M_18V (1)
A_5V (6)
D_5V (6)
A_12V (6)
IC2901
BA6149LS
C2903 270P
C2904 82P
R2901 56K
C2905 560P
C2902 50V1
C2901 16V100
X2901 VSX0136-1
L2901 100U VLQEL05T101J
L2902 VLQ0128
C2916 25V100 ECA1EM101B
C2917 25V100 ECA1EM101B
R2906 10K
Q2901 MSB709-RT2
QR2903 MUN2113T1
R2902 10K
R2903 150K
R2905 10K
QR2901 MUN2213T1
QR2902 MUN2213T1
C2906 50V1
R2904 5600
R2908 100K
R2907 2200
D2901 MA3160-LTX
D2922 MA3110-HTX
R2909 10K
C2907 0.01
R2910 10K
R2911 10K
QR2905 MUN2213T1
D2917 MA151K-TX
Q2902 2SD601A-TX
Q2903 2SD601A-TX
R2913 27(1/4W)
R2912 10K
R2914 560(2W) ERG2SJ561P
D2902 11DQ04
C2908 0.0022(B)
Q2904 2SB1151
L2903 330U ELC10E014
C2909 25V220 ECA1EM221B
(4) CAP_VM
(4) CAP_FB
Q2909 2SB772-PQR
Q2906 MSB709-RT2
R2918 10K
R2919 10K
R2921 2200
R2922 390(1/4W)
R2920 100K
D2904 11DQ04
L2904 330U ELC10E014
C2912 25V220 ECA1EM221B
Q2905 MSB709-RT2
R2917 10K
R2923 1800(1/4W)
C2910 50V4R7 ECA1HM4R7B
R2915 100K
R2916 15K
C2911 1000P
D2903 MA3160-LTX
1 S_REEL_VM
2 M_GND
3 T_REEL_VM
4 M_GND
P2901 VJS2149W
Q2912 2SB772-PQR
(2) S_REEL_FB
Q2911 MSB709-RT2
R2926 10K
R2928 10K
R2930 2200
R2931 390(1/4W)
R2929 100K
D2906 11DQ04
L2905 330U ELC10E014
C2915 25V220 ECA1EM221B
Q2910 MSB709-RT2
R2927 10K
R2932 1800(1/4W)
C2913 50V4R7 ECA1HM4R7B
R2924 100K
R2925 15K
C2914 1000P
D2905 MA3160-LTX
(2) T_REEL_FB
R2947 100
D2920 MA3068-MTX
D2907 MA701-TX
D2908 8P2M
C2918 16V100
C2919 0.01
R2933 1000
D2909 MA3020-TX
R2955 *PAT
C2921 50V2R2
C2920 0.1(V)
D2921 MA165TA5VT
R2954 0
R2934 10K
D2910 *PAT
R2935 10K
R2936 330
Q2913 MSD601-RT2
QR2904 MUN2111T1
IC2902 LM393PS-EL
R2952 220K
R2937 10K
R2953 10K
R2945 10K
C2922 16V100
C2926 16V33
D2918 MA151K-TX
R2939 10K
R2946 10K
R2951 10K
D2911 MA151K-TX
R2949 10K
R2950 10K
D2919 MA151K-TX
R2940 1000
C2923 0.01
D2912 MA4140-MTA
Q2914 2SD1275
C2924 *PAT
C2925 25V100 ECA1EM101B
R2941 330
D2913 MA3140-MTX
D2914 MA3160-HTX
D2915 MA3160-HTX
D2916 MA3160-HTX
R2942 270
R2943 270
R2944 270
*=REFER TO THE COMPARISON CHART
Ref No.2900 Series.

COMPONENT NAME	DC-DC	05/06
CIRCUIT BOARD NO.	MODEL NO.	
VEP06D28B	AG-MD835E	

SCM014


D_GND (1,3,4)
D_5V (1,3,5)
A_12V (1,2,5)
A_5V (1,2,3,4,5)
A_GND (1,2,3,4)
PAUSE_REMOTE (1)
REC_TALLY
TEST_L
NO_VIDEO_H
EE_H
CH2_AE_L
CH1_AE_L
HIFI_DREC_H
HIFI_MUTE_H
H.SW
S_CASS_L
FLY_E_H
CH2_MUTE_H
CH2_DREC_L
CH2_EE_L
CH1_MUTE_H
HIFI_H
CH1_D_REC_L
CH1_EE_L
S-VHS_H
D_REC_L
REC_H
SDA_F
SCK_F
SDA_34
SCK_34
A_H_SW (3)
TBC_MODE1 (3)
NOTCH_H
TBC_MODE0
4P_H
TBC_ON_H
H_A_SW
TRACK_ENV
ENV_SEL
TC_ON_H
X2_H
MONITER_CH2_H
MONITER_CH1_H
MONITER_NOR_L
COMPEL_VHS_L
REC_GATE_L
EDIT_H
TRICK_L
ROTARY_SW
ART_V
HSS
PB_CTL
CTL_PULSE
CAP_REV_H
TC_CLK
BACK_UP_5V
SR_AD (2)
CAP_FG (3)
IC6011
UPC2405AHF
3 OUT
GND 2
IN 1
C6052 0.1
+C6048 25V47 ECA1EM470B
C6049 0.1(V)
J6005 *PAT
P6005 VJS3202B020Z
1 D_GND
2 A_GND
3 D_GND
4 A_5V
5 PAUSE REMOTE
6 D_5V
7 REC TALLY
8 A_12V
9 TBC_MODE1
10 TEST(L)
11 NOTCH(H)
12 TBC_MODE0
13 4P(H)
14 NO_VIDEO(H)
15 SR_PHOTO
16 EE(H)
17 TBC_ON(H)
18 H.A.SW
19 TRACK ENV
20 ENV SEL
P6006 VJS3202B020Z
1 A_GND
2 CH2_AE(L)
3 CH1_AE(L)
4 HIFI D REC(H)
5 TC ON(H)
6 HIFI MUTE(H)
7 A.H.SW
8 S_CASS(L)
9 X2(H)
10 FLY_E(H)
11 CH2 MUTE(H)
12 MONITER CH2(H)
13 CH2 D REC(L)
14 MONITER CH1(H)
15 CH2 EE(L)
16 MONITER NOR(L)
17 CH1 MUTE(H)
18 HIFI(H)
19 CH1 D REC(L)
20 CH1 EE(L)
P6007 VJS3202B020Z
1 S-VHS(H)
2 A_GND
3 COMPEL_VHS(L)
4 H.SW
5 SDA_34
6 D REC(L)
7 REC(H)
8 EDIT(H)
9 TRICK(L)
10 ROTARY_SW
11 ART_V
12 HSS
13 PB_CTL
14 CAP_FG
15 CTL_PULSE
16 CAP_REV(H)
17 SCK_34
18 SDA_F
19 SCK_F
20 BACK_UP_5V
R6089 470/J6
R6090 470/J6
C6054 *PAT/UN
C6055 *PAT/UN

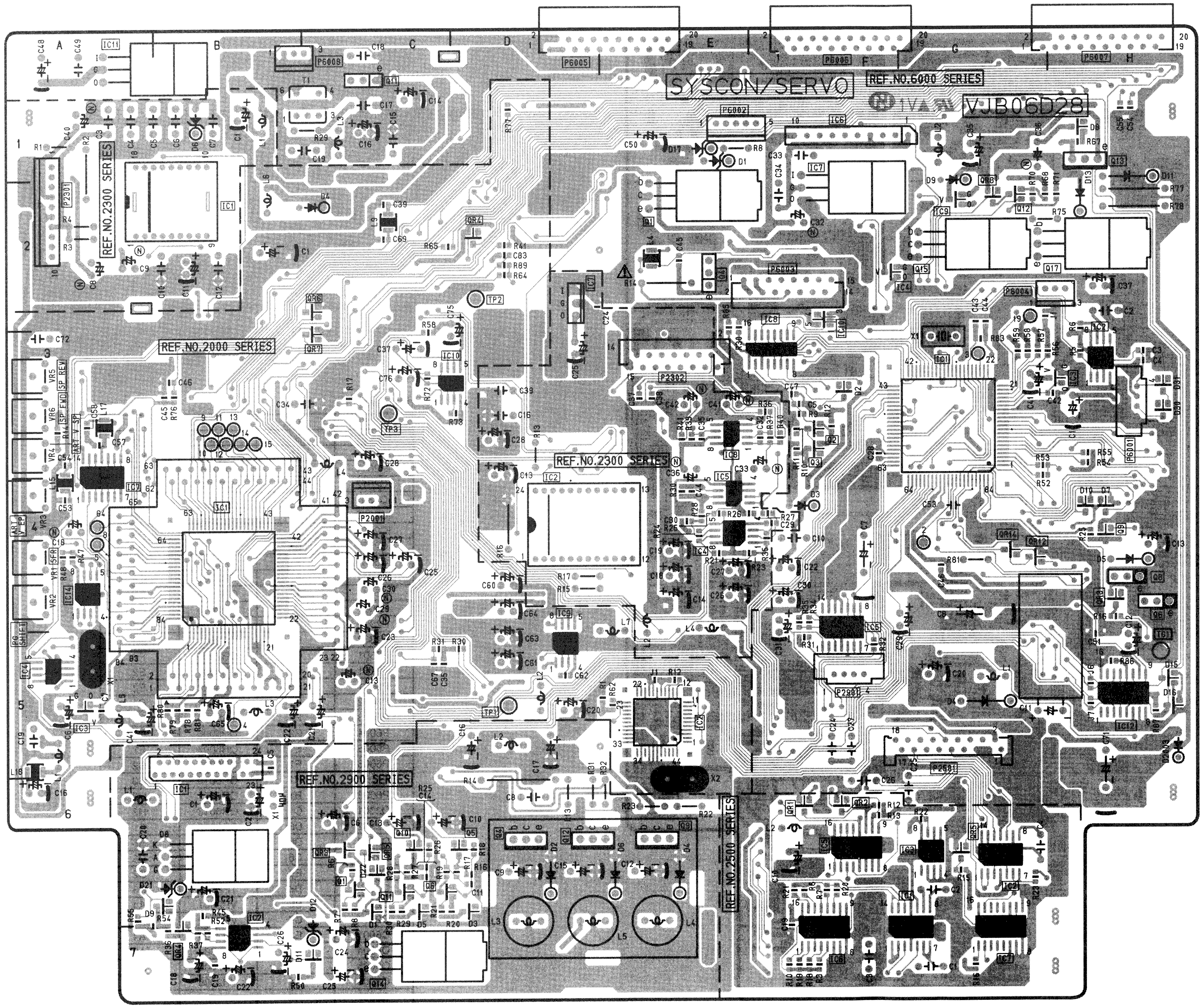
REF	NTSC	PAL	ON
IC2001	MN6743A	MN6743A	MN6743A
IC6001	MN1882410AA	MN1882410AA	MN1882410AA
J6001	0	*PAT	0/J6
R2085	*PAT	1000	1000/J6

Ref No.6000 Series.

COMPONENT NAME	CONNECTION	06/06
CIRCUIT BOARD NO.	MODEL NO.	
VEP06D28B	AG-MD835E	

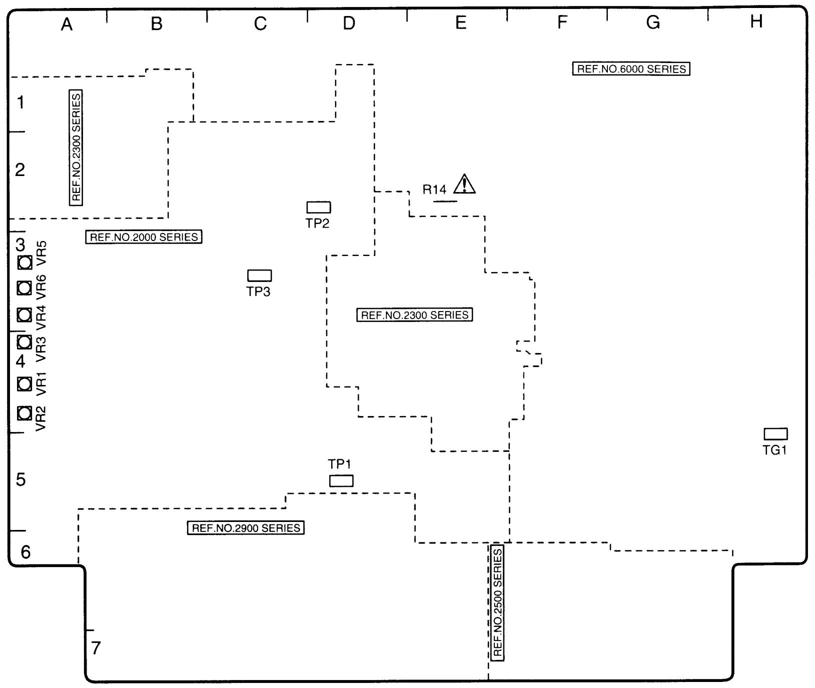
SCM015

SYSTEM CONTROL & SERVO P.C.BOARD (VEP06D28B)


SYSCON/SERVO
VJB06D28
REF.NO.6000 SERIES
REF.NO.2300 SERIES
REF.NO.2000 SERIES
REF.NO.2900 SERIES
REF.NO.2500 SERIES
P6005
P6006
P6007
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7

(COMPONENT SIDE)

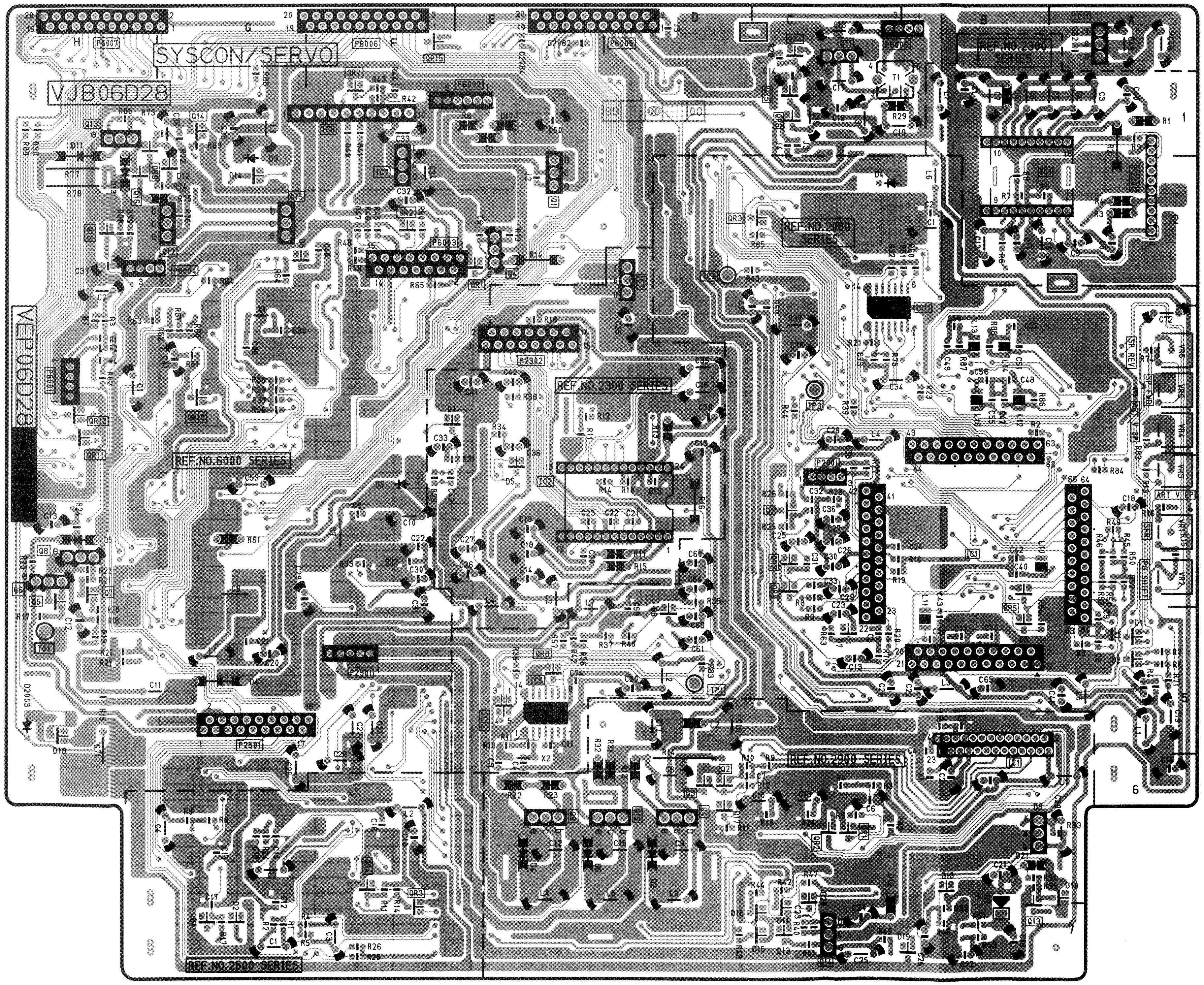
CBA-1


A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
REF.NO.6000 SERIES
REF.NO.2300 SERIES
REF.NO.2000 SERIES
REF.NO.2300 SERIES
REF.NO.2900 SERIES
REF.NO.2500 SERIES
R14
TP2
TP3
TP1
TG1
VR5
VR6
VR4
VR3
VR1
VR2

(COMPONENT SIDE)

REF	LOC	REF	LOC
IC2001	B4	P6008	E2
IC2002	E5	Q2901	F3
IC2003	G6	Q2904	E2
IC2004	E4	Q2905	C6
IC2009	G2	Q2906	H4
IC2014	C4	Q2909	H4
IC2301	B2	Q2910	C1
IC2302	D4	Q2911	D6
IC2304	F2	Q2912	G2
IC2307	F2	Q2914	G2
IC2308	F2	Q6001	C6
IC2310	F2	Q6002	F3
IC2501	G6	Q6003	D6
IC2502	G6	Q6004	D6
IC2503	H3	Q6006	H4
IC2505	F1	Q6008	E6
IC2506	A4	Q6009	C6
IC2507	E3	Q6011	C6
IC2901	B5	Q6012	H1
IC2902	B7	Q6013	C7
IC6001	G3	Q6015	H2
IC6002	A5	Q6017	F6
IC6003	A5	QR2004	C6
IC6004	F4	QR2006	C3
IC6005	F6	QR2007	G2
IC6006	F7	QR2501	F6
IC6007	D4	QR2502	C6
IC6007	D2	QR2505	C2
IC6007	G7	QR2903	H4
IC6009	C3	QR2904	D2
IC6010	A1	QR2905	G6
IC6011	H5	QR6003	B7
IC6012	A4	QR6008	G4
P2001	A2	QR6012	G4
P2301	E3	QR6014	H5
P2302	G5	TG6001	D5
P2501	F5	TP2001	D2
P2901	H3	TP2002	C3
P6001	E1	TP2003	A4
P6002	F2	VR2001	A4
P6003	H2	VR2002	A4
P6004	D1	VR2003	A3
P6005	F1	VR2004	A3
P6006	H1	VR2005	A3
P6007	B1	VR2006	A3

CBA-1


SYSCON/SERVO
VJB06D28
VEP06D28
REF.NO.2000 SERIES
REF.NO.2300 SERIES
REF.NO.6000 SERIES
REF.NO.2500 SERIES
REF.NO.2900 SERIES
P6007
P6006
P6005
P6002
P6003
P6004
P6001
P6008
P2301
P2302
P2501
P2901
IC6
IC7
IC5
IC1
IC2
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7

(FOIL SIDE)

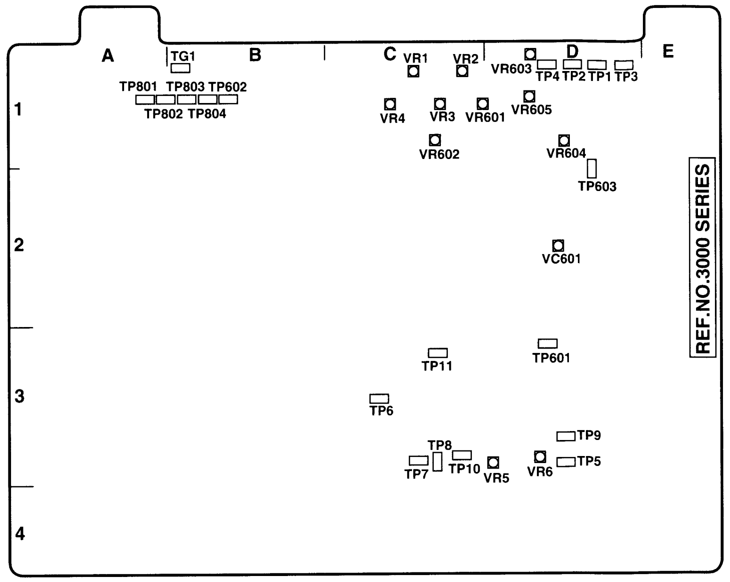
CBA-2

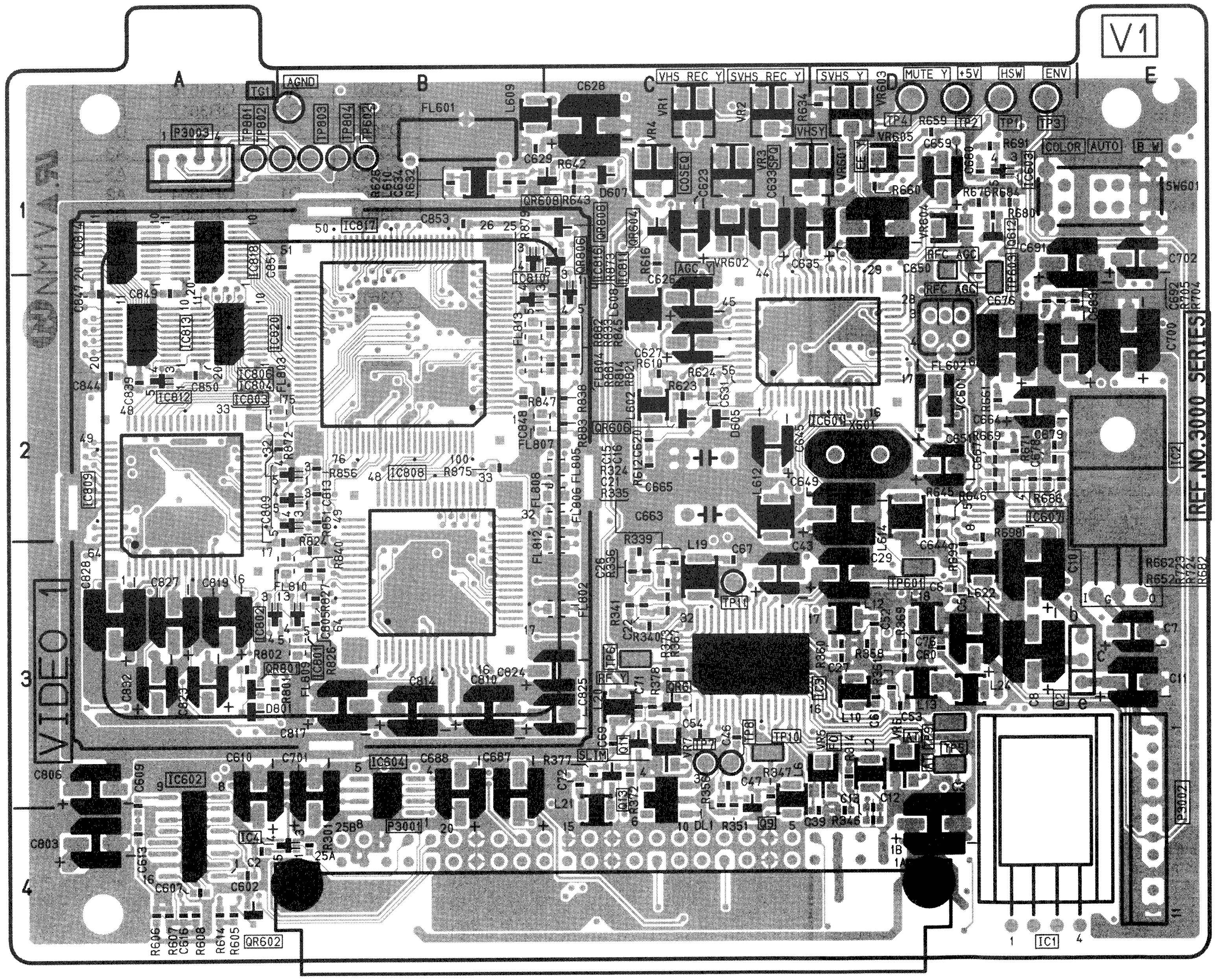
(FOIL SIDE)

REF	LOC	REF	LOC
IC2001	B4	Q6008	H4
IC2005	E5	Q6011	C1
IC2011	C3	Q6013	H1
IC2012	E5	Q6014	G1
IC2301	B2	Q6015	G2
IC2302	D4	Q6016	H2
IC2307	D2	Q6017	G2
IC2901	B5	Q6018	H2
IC6006	F1	QR2001	C4
IC6007	F2	QR2002	C4
IC6011	A1	QR2003	C2
P2001	C4	QR2005	B5
P2301	A2	QR2008	E5
P2302	E3	QR2503	F7
P2501	G5	QR2504	F6
P2901	F5	QR6001	E2
P6001	H3	QR6002	F2
P6002	E1	QR6004	C1
P6003	F2	QR6005	C1
P6004	G2	QR6006	C1
P6005	E1	QR6007	F1
P6006	F1	QR6009	G2
P6007	H1	QR6010	G3
P6008	B1	QR6011	H3
Q2001	C4	QR6013	H3
Q2902	D6	QR6015	F1
Q2903	D6	TG6001	H5
Q2904	D6	TP2001	D5
Q2909	E6	TP2002	D2
Q2912	D6	TP2003	C3
Q2913	B6	VR2001	A4
Q2914	C7	VR2002	A4
Q6001	E2	VR2003	A4
Q6004	E2	VR2004	A3
Q6005	H4	VR2005	A3
Q6006	H4	VR2006	A3
Q6007	H4		

CBA-2

VIDEO 1 P.C.BOARD (VEP03F35A)

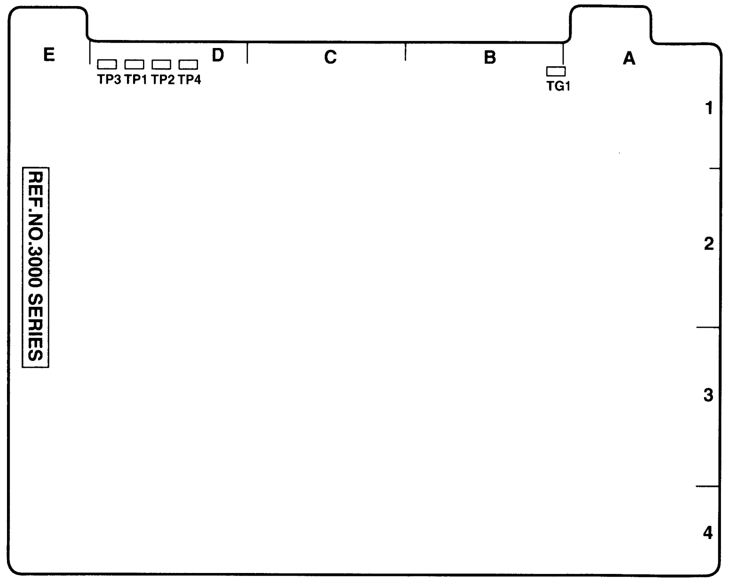

A
B
C
D
E
1
2
3
4
TG1
TP801
TP803
TP602
TP802
TP804
VR1
VR2
VR603
TP4
TP2
TP1
TP3
VR4
VR3
VR601
VR605
VR602
VR604
TP603
VC601
REF.NO.3000 SERIES
TP11
TP601
TP6
TP9
TP8
TP7
TP10
VR5
VR6
TP5

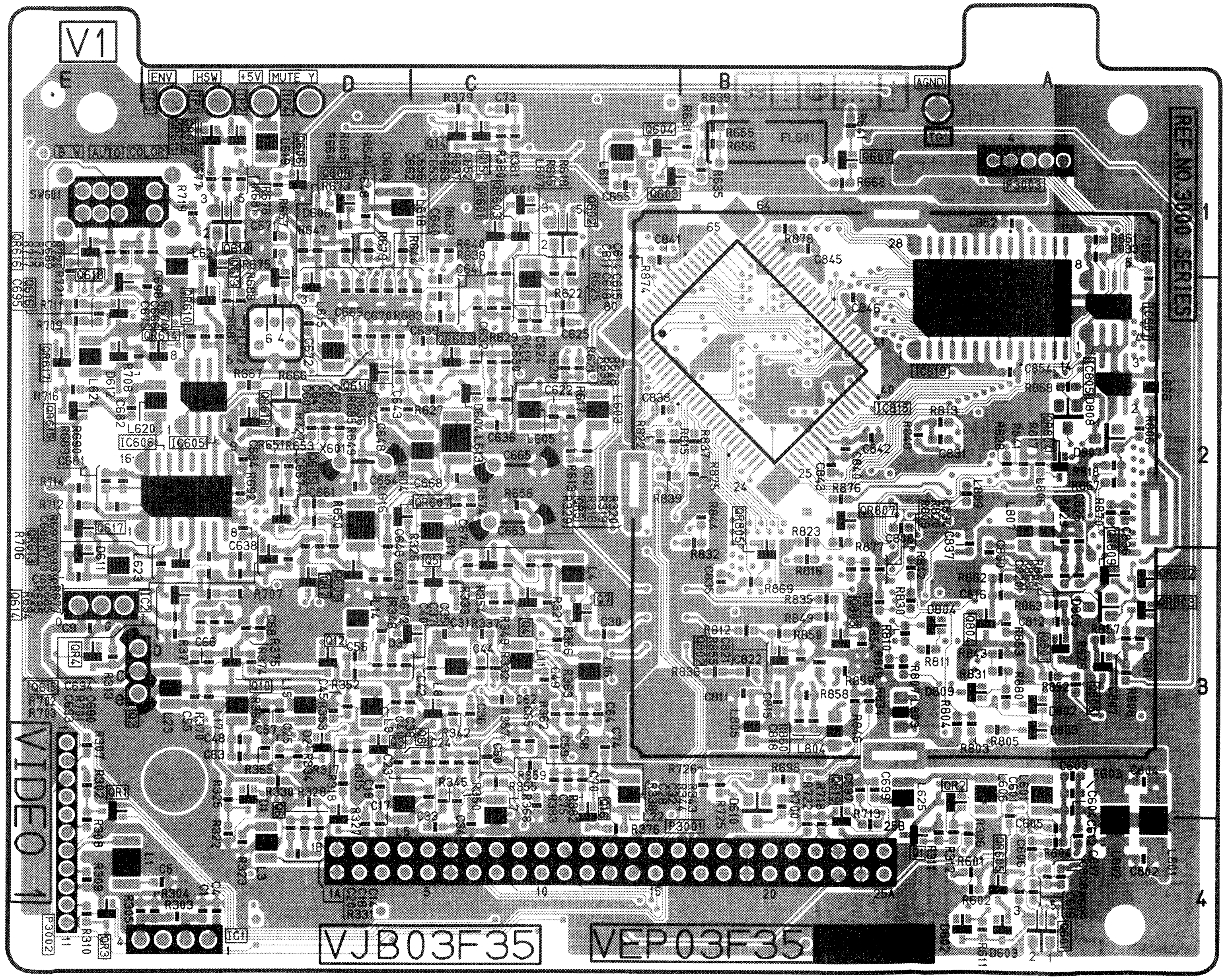

V1
A
B
C
D
E
1
2
3
4
TG1
AGND
P3003
FL601
VHS REC Y
SVHS REC Y
SVHS Y
MUTE Y
+5V
HSW
ENV
COLOR
AUTO
B W
SW601
REF.NO.3000 SERIES
VIDEO 1
IC817
IC808
IC809
IC602
IC604
P3001
P3002
IC1
QR602

(COMPONENT SIDE)

COMPONENT SIDE

REF	LOC	REF	LOC
IC3001	D4	QR3806	C2
IC3002	E2	QR3808	C1
IC3003	C3	TG3001	B1
IC3004	A4	TP3001	D1
IC3601	D2	TP3002	D1
IC3604	B3	TP3003	D1
IC3607	D2	TP3004	D1
IC3801	B3	TP3005	D3
IC3802	A3	TP3006	C3
IC3803	A2	TP3007	C3
IC3804	A2	TP3008	C3
IC3806	A2	TP3009	D3
IC3808	B2	TP3010	C3
IC3809	A2	TP3011	C3
IC3810	B1	TP3601	D3
IC3811	C2	TP3602	B1
IC3812	A2	TP3603	D2
IC3813	A2	TP3801	A1
IC3814	A1	TP3802	B1
IC3816	C2	TP3803	B1
IC3817	B1	TP3804	B1
IC3818	A1	VC3601	D2
P3001	B3	VR3001	C1
P3002	E2	VR3002	C1
P3003	A1	VR3003	C1
Q3002	D3	VR3004	C1
Q3006	C3	VR3005	C3
Q3011	C3	VR3006	D3
Q3013	C3	VR3007	C3
QR3602	A4	VR3504	D1
QR3604	C1	VR3601	D1
QR3606	C2	VR3602	C1
QR3608	B1	VR3603	D1
QR3801	A3		


E
D
C
B
A
TP3
TP1
TP2
TP4
TG1
1
2
3
4
REF.NO.3000 SERIES


V1
E
D
C
B
A
ENV
HSW
+5V
MUTE Y
AGND
B.W
AUTO
COLOR
SW601
FL601
REF.NO.3000 SERIES
1
2
3
4
VIDEO 1
VJB03F35
VEP03F35
P3002
1A
25A
1B
25B

(FOIL SIDE)

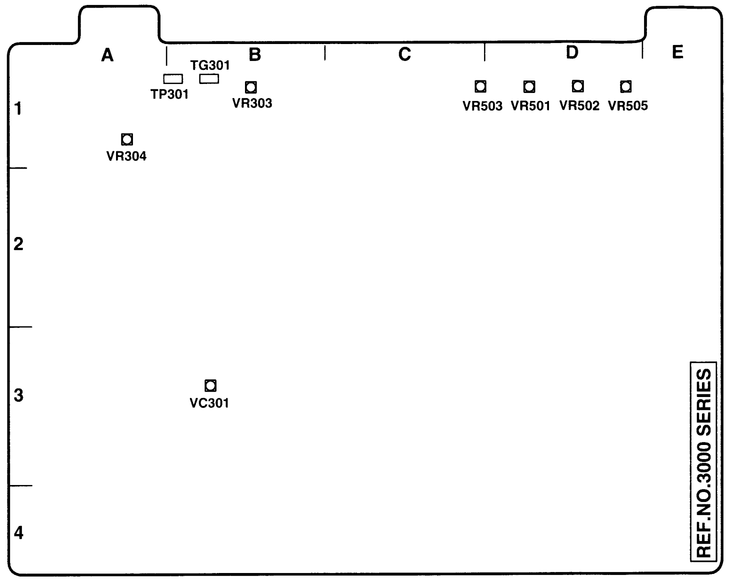
CBA-4

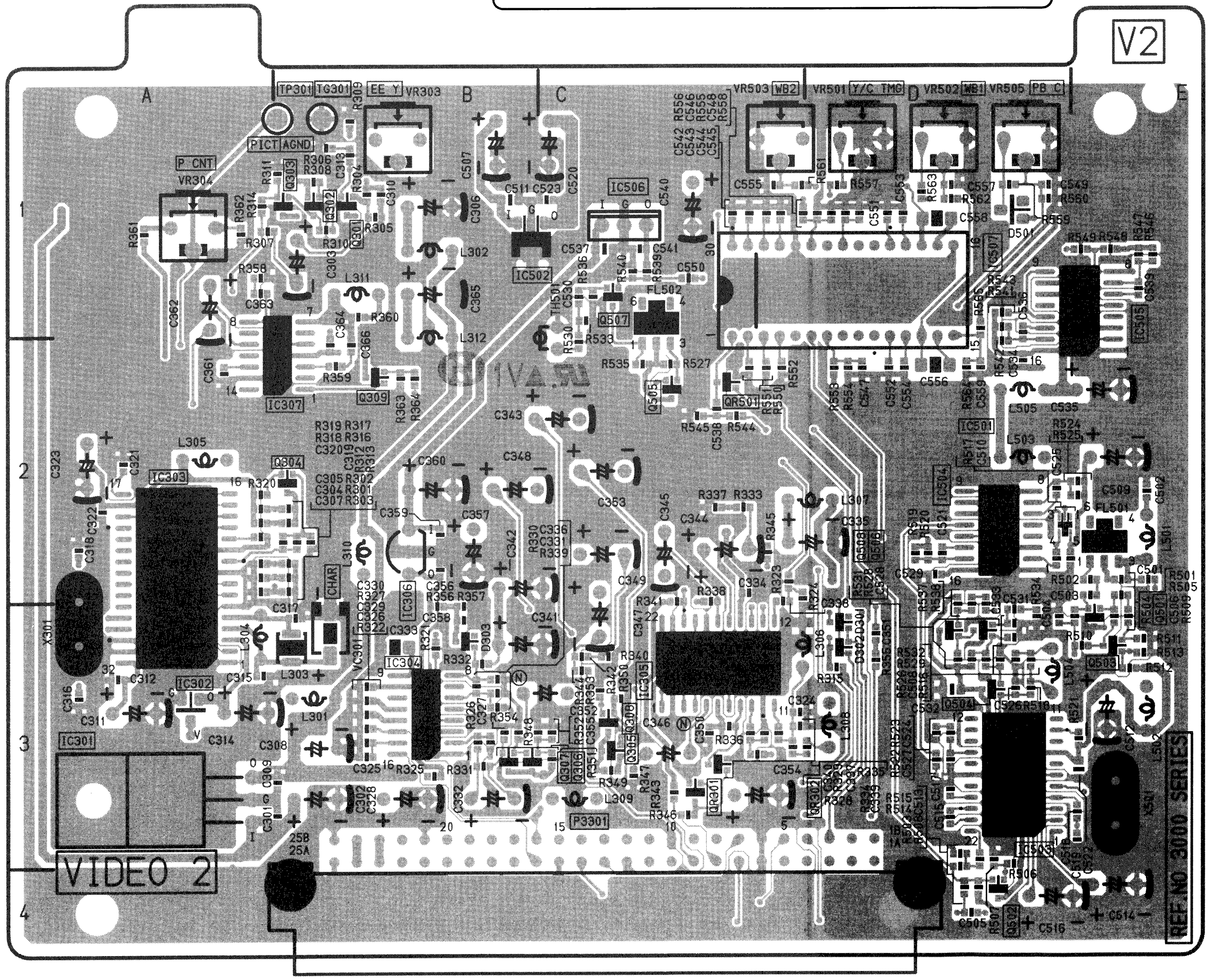
FOIL SIDE

REF	LOC	REF	LOC
IC3001	D4	Q3617	E2
IC3002	E3	Q3618	D2
IC3605	D2	Q3618	E1
IC3606	D2	Q3619	B4
IC3805	A2	Q3801	A3
IC3807	A2	Q3802	B3
IC3815	B2	Q3803	B3
IC3819	B2	Q3804	A3
P3001	C4	Q3805	A3
P3003	A1	QR3001	E3
P3005	E4	QR3002	A3
Q3001	B4	QR3003	E4
Q3002	E3	QR3004	E3
Q3003	D3	QR3007	D3
Q3004	C3	QR3601	C1
Q3005	C3	QR3603	C1
Q3006	D3	QR3605	A4
Q3007	C3	QR3609	C2
Q3008	C3	QR3610	D2
Q3010	D3	QR3611	D1
Q3012	D3	QR3612	D2
Q3014	C1	QR3613	D2
Q3015	C1	QR3614	D2
Q3016	C3	QR3615	E2
Q3601	A4	QR3616	E1
Q3602	C1	QR3617	E2
Q3603	C1	QR3618	D2
Q3604	C1	QR3802	A3
Q3605	D2	QR3803	A3
Q3606	D1	QR3804	A2
Q3607	B1	QR3805	B3
Q3608	D2	QR3807	B2
Q3609	D3	QR3809	A3
Q3610	D1	TG3001	B1
Q3613	D1	TP3001	D1
Q3614	D2	TP3002	D1
Q3615	D2	TP3003	D1
Q3616	E2	TP3004	D1

CBA-4

VIDEO 2 P.C.BOARD (VEP03F36A)

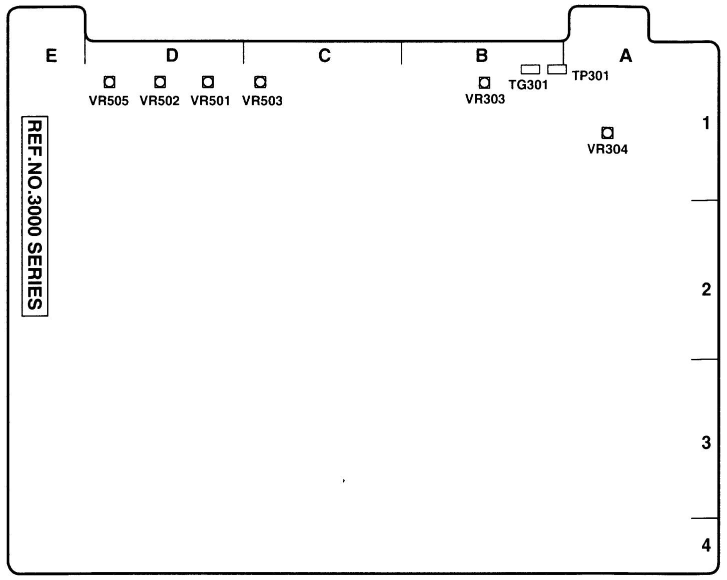

A
B
C
D
E
1
2
3
4
TP301
TG301
VR303
VR503
VR501
VR502
VR505
VR304
VC301
REF.NO.3000 SERIES


V2
A
B
C
D
E
1
2
3
4
TP301
TG301
EE Y
VR303
PICT
AGND
P CNT
VR304
VR503
WB2
VR501
Y/C TMG
VR502
WB1
VR505
PB C
IC301
IC302
IC303
IC304
IC305
IC306
IC307
IC501
IC502
IC504
IC505
IC506
IC507
IC503
P3301
X301
X501
CHAR
VIDEO 2
REF.NO.3000 SERIES

(COMPONENT SIDE)

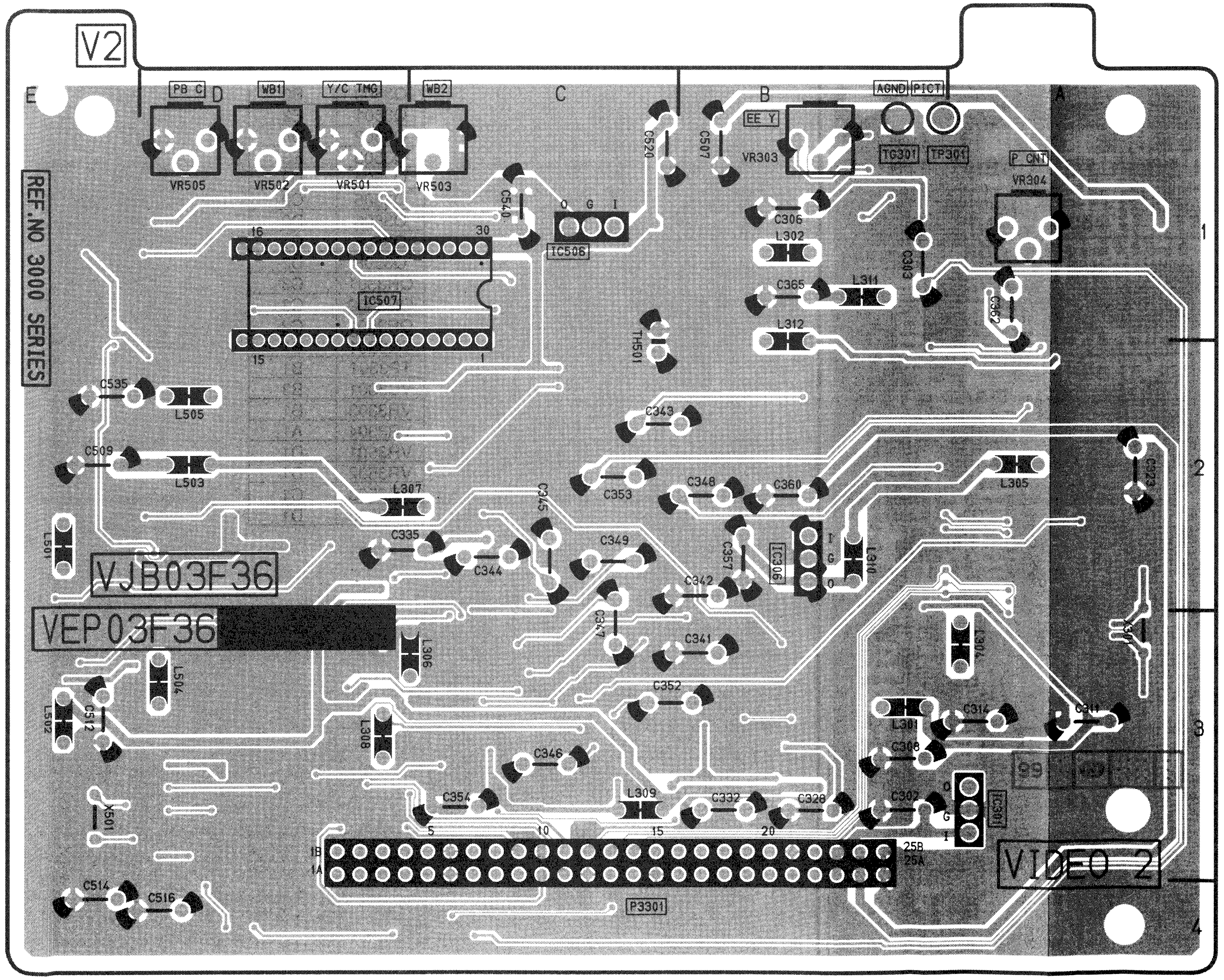
COMPONENT SIDE

REF	LOC
IC3301	A3
IC3302	A3
IC3303	A2
IC3304	B3
IC3305	C3
IC3306	B2
IC3307	A2
IC3501	D2
IC3502	B1
IC3503	D3
IC3504	D2
IC3505	E1
IC3506	C1
IC3507	D1
P3301	C3
Q3301	B1
Q3302	B1
Q3303	B1
Q3304	B2
Q3305	C3
Q3306	C3
Q3307	C3
Q3308	C3
Q3309	B2
Q3501	E2
Q3502	D4
Q3503	E3
Q3504	D3
Q3505	C2
Q3506	D2
Q3507	C1
Q3508	D2
QR3301	C3
QR3302	C3
QR3501	C2
TG3301	B1
TP3301	B1
VC3301	B3
VR3303	B1
VR3304	A1
VR3501	D1
VR3502	D1
VR3503	C1
VR3505	D1


E
D
C
B
A
VR505
VR502
VR501
VR503
VR303
TG301
TP301
VR304
REF.NO.3000 SERIES
1
2
3
4

FOIL SIDE

REF	LOC
IC3301	A3
IC3306	A2
IC3506	C1
IC3507	D1
P3301	C3
TG3301	B1
TP3301	B1
VR3303	B1
VR3501	D1
VR3502	D1
VR3503	C1
VR3505	D1


V2
REF.NO 3000 SERIES
PB C
WB1
Y/C TMG
WB2
AGND
PICT
EE Y
P CNT
VR505
VR502
VR501
VR503
VR303
VR304
TG301
TP301
IC506
IC507
IC306
IC301
P3301
C540
C520
C507
C306
C363
C365
C367
C535
C509
C343
C348
C353
C360
C345
C335
C344
C349
C357
C342
C347
C341
C352
C346
C354
C332
C328
C307
C308
C311
C373
C512
C514
C516
L302
L311
L312
L505
L503
L307
L305
L501
L310
L306
L504
L502
L308
L309
L304
L301
X501
TH501
VJB03F36
VEP03F36
VIDEO 2
E
D
C
B
A
1
2
3
4

(FOIL SIDE)

SECTION 6

REPLACEMENT PARTS LIST

Note:

1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS, all capacitors are in MICROFARADS (μF), P=$\mu\mu$F.
3. The P.C. Board units marked with "■" shown below the main assembled parts.
4. The parts marked with E on the exploded view show the electric parts.
5. IMPORTANT SAFETY NOTICE
   Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
   After the discontinuation of this assembly in production, it will no longer be available

<<Abbreviations for part>>

<NAME>		<DESCRIPTIONS>
C. CAPACITOR		CERAMIC CAPACITOR
C. CAPACITOR	CH	CERAMIC CHIP CAPACITOR
E. CAPACITOR		ELECTROLYTIC CAPACITOR
G. CAPACITOR		GLASS CAPACITOR
M. CAPACITOR		MICA CAPACITOR
P. CAPACITOR		PLASTIC FILM CAPACITOR
S. CAPACITOR		SEMI-CONDUCTOR CAPACITOR
T. CAPACITOR		TANTALUM CAPACITOR
TRIMMER		TRIMMER
C. RESISTOR		CARBON RESISTOR
F. RESISTOR		FUSE RESISTOR
M. RESISTOR		METAL OXSIDE RESISTOR
M. RESISTOR	CH	METAL OXSIDE CHIP RESISTOR
S. RESISTOR		SOLID RESISTOR
V. RESISTOR		VARIABLE RESISTOR
W. RESISTOR		WIRE WOUND RESISTOR
COMBI. TR-R		TRANSISTOR-RESISTOR COMBINATION PARTS
COMBI. R-R		RESISTOR-RESISTOR COMBINATION PARTS
COMBI. C-R		CAPACITOR-RESISTOR COMBINATION PARTS
COMBI. C-R-R		CAPACITOR-RESISTOR-COIL COMBINATION PARTS
P.C. BOARD		PRINTED CIRCUIT BOARD
W/COMPONENT		WITH COMPONENT

ELECTRICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
■	VEP06D28B	SYSCON SERVO C.B.A.	1	(RTL)
■	VEP03F35A	VIDEO 1 C.B.A.	1	(RTL)
■	VEP03F36A	VIDEO 2 C.B.A.	1	(RTL)
■	VEP000D7A	MOTHER C.B.A.	1	(RTL)
■	VEP06921B	FRONT C.B.A.	1	(RTL)
■	VEP05162Q	HEAD AMP C.B.A.	1	(RTL)
■	VEP06D28B	SYSCON SERVO C.B.A.	1	(RTL)
C2001	ECA0JM102B	E. CAPACITOR 6.3V 1000U	1	
C2002	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2005	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2006	ECEA1CKA330	E. CAPACITOR 16V 33U	1	
C2007	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2008	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C2009	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C2013	ECEA1HKN010	E. CAPACITOR 50V 1U	1	
C2016	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C2017	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2018	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C2019	ECQB1H472JF	P. CAPACITOR 50V 4700P	1	
C2021	ECEA1CKA330	E. CAPACITOR 16V 33U	1	
C2022	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C2023	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2024	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C2025	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C2026	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C2027	ECEA1HKA3R3	E. CAPACITOR 50V 3.3U	1	
C2028	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C2029, 30	ECEA1EKN3R3	E. CAPACITOR 25V 3.3U	2	
C2031	ECUM1H223ZFN	C. CAPACITOR CH 50V 0.022U	1	
C2032	ECUX1H392KBN	C. CAPACITOR CH 50V 3900P	1	
C2033	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2034	ECQB1H683JF	P. CAPACITOR 50V 0.068U	1	
C2036	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2037	ECA1HM4R7	E. CAPACITOR 50V 4.7U	1	
C2038	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C2039, 40	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	2	
C2041	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C2042-56	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	15	
C2065	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2067	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C2069	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C2070	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2071	ECEA1ASS332Z	E. CAPACITOR 10V 3300U	1	
C2072	ECQB1H332JF	P. CAPACITOR 50V 3300P	1	
C2075	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C2076	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2301	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2303-06	ECQV1H104JL	P. CAPACITOR 50V 0.1U	4	
C2307	ECQB1H683JF	P. CAPACITOR 50V 0.068U	1	
C2308, 09	ECEA1HKN4R7	E. CAPACITOR 50V 4.7U	2	
C2310	ECQB1H473JF	P. CAPACITOR 50V 0.047U	1	
C2311	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2312	ECQV1H474JL	P. CAPACITOR 50V 0.47U	1	
C2313	ECEA1EKA470	E. CAPACITOR 25V 47U	1	
C2314	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2315	ECUX1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C2316	ECQV1H104JL	P. CAPACITOR 50V 0.1U	1	
C2318, 19	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	2	
C2320-23	ECUX1H333KBN	C. CAPACITOR CH 50V 0.033U	4	
C2324	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2325	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C2326, 27	ECEA0JKA470	E. CAPACITOR 6.3V 47U	2	
C2328	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	1	
C2329, 30	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2	
C2333	ECEA1HKN2R2	E. CAPACITOR 50V 2.2U	1	
C2336	ECEA1HKN2R2	E. CAPACITOR 50V 2.2U	1	
C2337, 38	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C2339	ECQV1H104JL	P. CAPACITOR 50V 0.1U	1	
C2340	ECEA1HKN4R7	E. CAPACITOR 50V 4.7U	1	
C2343, 44	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	2	
C2501	ECQB1H473JF	P. CAPACITOR 50V 0.047U	1	
C2502	ECQB1H222JF	P. CAPACITOR 50V 2200P	1	
C2503	ECQB1H273JF	P. CAPACITOR 50V 0.027U	1	
C2504	ECQB1H222JF	P. CAPACITOR 50V 2200P	1	
C2510	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C2512-14	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	3	
C2516-19	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	4	
C2901	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C2902	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C2903	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
C2904	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C2905	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C2906	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C2907	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2908	ECQB1H222JF	P. CAPACITOR 50V 2200P	1	
C2909	ECA1EM221	E. CAPACITOR 25V 220U	1	
C2910	ECA1HM4R7	E. CAPACITOR 50V 4.7U	1	
C2911	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C2912	ECA1EM221	E. CAPACITOR 25V 220U	1	
C2913	ECA1HM4R7	E. CAPACITOR 50V 4.7U	1	
C2914	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C2915	ECA1EM221	E. CAPACITOR 25V 220U	1	
C2916, 17	ECA1EM101	E. CAPACITOR 25V 100U	2	
C2918	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C2919	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2920	ECQV1H104JL	P. CAPACITOR 50V 0.1U	1	
C2921	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	1	
C2922	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C2923	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C2925	ECA1EM101	E. CAPACITOR 25V 100U	1	
C2926	ECEA1CKA330	E. CAPACITOR 16V 33U	1	
C6001	ECA1HM4R7	E. CAPACITOR 50V 4.7U	1	
C6002	ECQB1H104JF	P. CAPACITOR 50V 0.1U	1	
C6003, 04	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C6005, 06	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C6007, 08	ECEA1ASS332Z	E. CAPACITOR 10V 3300U	2	
C6009	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C6010	ECQV1H224JL	P. CAPACITOR 50V 0.22U	1	
C6011	ECA1CM222	E. CAPACITOR 16V 2200U	1	
C6012	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C6013	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C6014	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C6015	ECQB1H103JF3	P. CAPACITOR 50V 0.01U	1	
C6016	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6017	ECQB1H472JF	P. CAPACITOR 50V 4700P	1	
C6018	ECQB1H333JF	P. CAPACITOR 50V 0.033U	1	
C6019	ECQB1H103JF3	P. CAPACITOR 50V 0.01U	1	
C6020	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C6021	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6022	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C6023	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6024-27	ECQB1H102JF	P. CAPACITOR 50V 1000P	4	
C6028	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C6029, 30	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C6031	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C6032	ECEA1HKN010	E. CAPACITOR 50V 1U	1	
C6033, 34	ECQB1H104JF	P. CAPACITOR 50V 0.1U	2	
C6035	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C6036	ECEA1CN101S	E. CAPACITOR 16V 100U	1	
C6037	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C6038, 39	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	2	
C6040	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1	
C6041	ECEA1CKA220	E. CAPACITOR 16V 22U	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
C6042	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C6043	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C6045	ECUM1H271KBN	C. CAPACITOR CH 50V 270P	1	
C6046, 47	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C6048	ECA1EM470	E. CAPACITOR 25V 47U	1	
C6049	ECQV1H104JL	P. CAPACITOR 50V 0. 1U	1	
C6050	ECEA1EKA470	E. CAPACITOR 25V 47U	1	
C6051	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C6052	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C6053	ECQV1H274JL	P. CAPACITOR 50V 0. 27U	1	
D2001	MA151WK	DIODE	1	
D2003, 04	11EQS04	DIODE	2	
D2005	MA151WK	DIODE	1	
D2007	MA151K	DIODE	1	
D2304, 05	MA153	DIODE	2	
D2306	MA4062	DIODE	1	
D2501, 02	MA151K	DIODE	2	
D2901	MA3160-L	DIODE	1	
D2902	11DQ04	DIODE	1	
D2903	MA3160-L	DIODE	1	
D2904	11DQ04	DIODE	1	
D2905	MA3160-L	DIODE	1	
D2906	11DQ04	DIODE	1	
D2907	MA701A	DIODE	1	
D2908	8P2M	DIODE	1	
D2909	MA3020	DIODE	1	
D2911	MA151K	DIODE	1	
D2912	MA4140-M	DIODE	1	
D2913	MA3140-M	DIODE	1	
D2914-16	MA3160-H	DIODE	3	
D2917-19	MA151K	DIODE	3	
D2920	MA3068-M	DIODE	1	
D2921	MA165	DIODE	1	
D2922	MA3110-H	DIODE	1	
D6001	MA4075M	DIODE	1	
D6002	MA151K	DIODE	1	
D6003	11EQS04	DIODE	1	
D6004	10E1FA8	DIODE	1	
D6005	MA170	DIODE	1	
D6006	MA151K	DIODE	1	
D6007	MA153	DIODE	1	
D6008	MA151K	DIODE	1	
D6009	11EQS04	DIODE	1	
D6010	MA153	DIODE	1	
D6011	10E1FA8	DIODE	1	
D6012	MA151K	DIODE	1	
D6013	MA170	DIODE	1	
D6014	MA151K	DIODE	1	
D6015, 16	MA153	DIODE	2	
D6017	MA4075M	DIODE	1	
D6018	MA153	DIODE	1	
D6030, 31	MA151K	DIODE	2	
IC2001	MN6743AE	IC	1	
IC2003	MN1382-R	IC	1	
IC2004	AN3727S	IC	1	
IC2010	UPC358G2	IC	1	
IC2011	MC14070BF	IC	1	
IC2012	TC7S04F	IC	1	
IC2014	LM393PS	IC	1	
IC2301	AN3815K	IC	1	
IC2302	BA6435S	IC	1	
IC2304	LM393PS	IC	1	
IC2305	UPC4556G2	IC	1	
IC2307	AN78N12	IC	1	
IC2501, 02	LM324NS	IC	2	
IC2503	LM393PS	IC	1	
IC2505	MC14053BF	IC	1	
IC2506	MC14052BF	IC	1	
IC2507	MC14053BF	IC	1	
IC2901	BA6149LS	IC	1	
IC2902	LM393PS	IC	1	
IC6001	MN1882410AA	IC	1	
IC6002	LM393PS	IC	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
IC6003	MN1382-R	IC	1	
IC6004	MN1382-U	IC	1	
IC6005	LM324NS	IC	1	
IC6006	M54649L	IC	1	
IC6007	AN78M12	IC	1	
IC6008	CD4019BCMX	IC	1	
IC6009	MN1382-R	IC	1	
IC6010	TC4S69F	IC	1	
IC6011	UPC2405AHF	IC	1	
IC6012	MC14053BF	IC	1	
J6004	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
L2001	VLQEL05S101J	COIL 100UH	1	
L2003-05	VLQEL05S101J	COIL 100UH	3	
L2006	VLQ0129	COIL 300UH	1	
L2009-12	VLQ0163J221	COIL 220UH	4	
L2015, 16	VLQ0163J221	COIL 220UH	2	
L2018	VLQ0163J221	COIL 220UH	1	
L2301, 02	VLQEL05S101J	COIL 100UH	2	
L2304	VLQEL05S101J	COIL 100UH	1	
L2502	VLQEL05S101J	COIL 100UH	1	
L2901	VLQEL05S101J	COIL 100UH	1	
L2902	VLQ0128	COIL	1	
L2903-05	ELC10E014	COIL	3	
L6001	VLQEL05S101J	COIL 100UH	1	
L6002	VLQEL05S150J	COIL 15UH	1	
L6003	VLQEL05S471J	COIL 470UH	1	
L6004	VLQ0163J221	COIL 220UH	1	
P2001	VJP1230T	CONNECTOR (MALE) 3P	1	
P2301	VJP3078	CONNECTOR (MALE)	1	
P2302	VJS1477	CONNECTOR (FEMALE)	1	
P2501	VJS3135	CONNECTOR (FEMALE)	1	
P2901	VJS2149W	CONNECTOR (FEMALE)	1	
P6001	VJS2149W	CONNECTOR (FEMALE)	1	
P6002	VJP3529	CONNECTOR (MALE)	1	
P6003	VJS1477	CONNECTOR (FEMALE)	1	
P6004	VJP1230T	CONNECTOR (MALE) 3P	1	
P6005-07	VJS3202B020Z	CONNECTOR (FEMALE)	3	
P6008	VJP1230T	CONNECTOR (MALE) 3P	1	
Q2001	MSD601-R	TRANSISTOR	1	
Q2901	MSB709-R	TRANSISTOR	1	
Q2902, 03	2SD601A	TRANSISTOR	2	
Q2904	2SB1151	TRANSISTOR	1	
Q2905, 06	MSB709-R	TRANSISTOR	2	
Q2909	2SB772-R	TRANSISTOR	1	
Q2910, 11	MSB709-R	TRANSISTOR	2	
Q2912	2SB772-R	TRANSISTOR	1	
Q2913	MSD601-R	TRANSISTOR	1	
Q2914	2SD1275	TRANSISTOR	1	
Q6001	2SD1474	TRANSISTOR	1	
Q6002, 03	MSD601-R	TRANSISTOR	2	
Q6004	2SD973	TRANSISTOR	1	
Q6005	MSB709-R	TRANSISTOR	1	
Q6006	2SB819	TRANSISTOR	1	
Q6007	MSD601-R	TRANSISTOR	1	
Q6008	2SB819	TRANSISTOR	1	
Q6009	MSD601-R	TRANSISTOR	1	
Q6011	2SD636-R	TRANSISTOR	1	
Q6012	MSD601-R	TRANSISTOR	1	
Q6013	2SB819	TRANSISTOR	1	
Q6014	MSD601-R	TRANSISTOR	1	
Q6015	2SD1273-0	TRANSISTOR	1	
Q6016	MSD601-R	TRANSISTOR	1	
Q6017	2SB941	TRANSISTOR	1	
Q6018	MSD601-R	TRANSISTOR	1	
QR2001, 02	MUN2213	TRANSISTOR-RESISTOR	2	
QR2004-08	MUN2213	TRANSISTOR-RESISTOR	5	
QR2501-05	MUN2213	TRANSISTOR-RESISTOR	5	
QR2901, 02	MUN2213	TRANSISTOR-RESISTOR	2	
QR2903	MUN2113	TRANSISTOR-RESISTOR	1	
QR2904	MUN2111	TRANSISTOR-RESISTOR	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
QR2905	MUN2213	TRANSISTOR-RESISTOR	1	
QR6001	MUN2111	TRANSISTOR-RESISTOR	1	
QR6002	MUN2113	TRANSISTOR-RESISTOR	1	
QR6003	MUN2212	TRANSISTOR-RESISTOR	1	
QR6004	MUN2213	TRANSISTOR-RESISTOR	1	
QR6005	MUN2212	TRANSISTOR-RESISTOR	1	
QR6006	MUN2111	TRANSISTOR-RESISTOR	1	
QR6007	MUN2211	TRANSISTOR-RESISTOR	1	
QR6008	DTA143XK	TRANSISTOR-RESISTOR	1	
QR6009	MUN2213	TRANSISTOR-RESISTOR	1	
QR6010	MUN2111	TRANSISTOR-RESISTOR	1	
QR6011-15	MUN2213	TRANSISTOR-RESISTOR	5	
R2001	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2002	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2003	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R2004	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	1	
R2008, 09	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	2	
R2014	ERJ6GEYG823	M. RESISTOR CH 1/10W 82K	1	
R2015	ERJ6GEYG562	M. RESISTOR CH 1/10W 5. 6K	1	
R2016	ERJ6GEYG682	M. RESISTOR CH 1/10W 6. 8K	1	
R2017	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2018, 19	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R2020	ERJ6GEYG272	M. RESISTOR CH 1/10W 2. 7K	1	
R2022	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R2023	ERJ6GEYG622	M. RESISTOR CH 1/10W 6. 2K	1	
R2025	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	1	
R2026	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2027	ERJ6GEYG332	M. RESISTOR CH 1/10W 3. 3K	1	
R2030-32	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	3	
R2039	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R2041	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R2043, 44	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	2	
R2045-47	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	3	
R2048	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1	
R2049	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	1	
R2050	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2051, 52	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R2053	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2054	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	1	
R2058, 59	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R2060, 61	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	2	
R2070	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R2072, 73	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R2074	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R2075	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R2076	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	1	
R2080, 81	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R2083	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2084	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R2085	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2087, 88	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	2	
R2089	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R2301	ERDS2TJ150	C. RESISTOR 1/4W 15	1	
R2302	ERX12SJR68	M. RESISTOR 1/2W 0. 68	1	
R2303, 04	ERDS2TJ150	C. RESISTOR 1/4W 15	2	
R2305	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2306	ERJ6GEYG332	M. RESISTOR CH 1/10W 3. 3K	1	
R2307, 08	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	2	
R2309	ERJ6GEYG122	M. RESISTOR CH 1/10W 1. 2K	1	
R2310	ERJ6GEYG242	M. RESISTOR CH 1/10W 2. 4K	1	
R2311	ERJ6GEYJ684	M. RESISTOR CH 1/10W 680K	1	
R2312	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	1	
R2313	ERDS2TJ330	C. RESISTOR 1/4W 33	1	
R2314	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2315	ERDS2TJ330	C. RESISTOR 1/4W 33	1	
R2316	ERX12SJR47	M. RESISTOR 1/2W 0. 47	1	
R2317	ERDS2TJ330	C. RESISTOR 1/4W 33	1	
R2318	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R2321	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2323	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2324	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	1	
R2325-28	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
R2329, 30	ERJ6GEYG184	M. RESISTOR CH 1/10W 180K	2	
R2331	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
R2334	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	1	
R2335	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	1	
R2340, 41	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	2	
R2501	ERJ6GEYG682	M. RESISTOR CH 1/10W 6. 8K	1	
R2502	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R2503	ERJ6GEYJ274	M. RESISTOR CH 1/10W 270K	1	
R2504	ERJ6GEYF123	M. RESISTOR CH 1/10W 12K	1	
R2505	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1	
R2506	ERJ6GEYG154	M. RESISTOR CH 1/10W 150K	1	
R2507-15	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	9	
R2516	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
R2517	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R2518-20	ERJ6GEYF124	M. RESISTOR CH 1/10W 120K	3	
R2521	ERJ6GEYG154	M. RESISTOR CH 1/10W 150K	1	
R2522	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2523, 24	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
R2525	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R2526	ERJ6GEYG823	M. RESISTOR CH 1/10W 82K	1	
R2901	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
R2902	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2903	ERJ6GEYG154	M. RESISTOR CH 1/10W 150K	1	
R2904	ERJ6GEYG562	M. RESISTOR CH 1/10W 5. 6K	1	
R2905, 06	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R2907	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R2908	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2909-12	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
R2913	ERDS2TJ270	C. RESISTOR 1/4W 27	1	
R2914	ERG2SJ561	M. RESISTOR 2W 560	1	
R2915	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2916	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	1	
R2917-19	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R2920	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2921	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R2922	ERDS2TJ391	C. RESISTOR 1/4W 390	1	
R2923	ERDS2TJ182	C. RESISTOR 1/4W 1. 8K	1	
R2924	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2925	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	1	
R2926-28	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R2929	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2930	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R2931	ERDS2TJ391	C. RESISTOR 1/4W 390	1	
R2932	ERDS2TJ182	C. RESISTOR 1/4W 1. 8K	1	
R2933	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2934, 35	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R2936	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R2937	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2939	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2940	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2941	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R2942-44	ERJ6GEYG271	M. RESISTOR CH 1/10W 270	3	
R2945, 46	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R2947	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R2949-51	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R2952	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	1	
R2953	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2954	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R6001, 02	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	2	
R6003	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R6004	ERJ6GEYG122	M. RESISTOR CH 1/10W 1. 2K	1	
R6005, 06	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R6007	ERJ6GEYG182	M. RESISTOR CH 1/10W 1. 8K	1	
R6008	ERDS2TJ181	C. RESISTOR 1/4W 180	1	
R6009	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R6010	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R6011	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R6012	ERJ6GEYG121	M. RESISTOR CH 1/10W 120	1	
R6013	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
⚠ R6014	ERD2FCG220	C. RESISTOR 2W 22	1	
R6015	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R6016	ERJ6GEYG272	M. RESISTOR CH 1/10W 2. 7K	1	
R6017	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R6018, 19	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R6020	ERJ6GEYG272	M. RESISTOR CH 1/10W 2. 7K	1	
R6021	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	1	
R6022	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
R6023	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R6024-27	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4	
R6028	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6029	ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R6030	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6031	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6032	ERJ6GEYG302	M.RESISTOR CH 1/10W 3K	1	
R6033	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6034-39	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	6	
R6040, 41	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R6042	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6043	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R6044	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R6045	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6046-50	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R6051	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R6052-59	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R6060-65	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	6	
R6066	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R6067, 68	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	2	
R6069	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R6070	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R6071	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R6072, 73	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R6074	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6075	ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R6076	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R6077, 78	ERG1SJ300	M.RESISTOR 1W 30	2	
R6079	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R6080	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R6081	ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R6082	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6083	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R6084-87	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4	
R6088-90	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	3	
T6001	EIQ7QF002B	TRANSFORMER	1	
TG6001	VJR0098	TEST POINT	1	
TP2001-03	VJR0098	TEST POINT	3	
VR2001	EVN49CA00B23	V.RESISTOR 2K	1	
VR2002	EVN49CA00B15	V.RESISTOR 100K	1	
VR2004	EVN49CA00B25	V.RESISTOR 200K	1	
VR2005, 06	EVN49CA00B15	V.RESISTOR 100K	2	
X2001	VSX0296	CRYSTAL OSCILLATOR	1	
X2901	VSX0136	CRYSTAL OSCILLATOR	1	
X6001	VSX0230	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VJF0304	CLIP	2	
	VMC0075	HEAT SINK HOLDER SPRING	1	
	VMC0493	HEAT SINK HOLDER SPRING	1	
	VSC1215	IC HEAT SINK	1	
	VSWC3405	HEAT SINK (A)	1	
	VEE8575	CABLE	1	
	VWJ0753	REEL DRIVE CARD	1	
	VEE8573	FULL ERASE CABLE	1	
	VMX0985	MINI CARD SPACER	2	
■	VEP03F35A	VIDEO 1 C.B.A.	1	(RTL)
C3001, 02	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3003	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C3004	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3006	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3007	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C3008	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C3009	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3010	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
C3011	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3013	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3015	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3016	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3017	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3019	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3020	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3021	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3022	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3023	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C3024	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3025	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3026	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3027, 28	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3029	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3030	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3031	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3032	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3033	ECUX1H390JC	C.CAPACITOR CH 50V 39P	1	
C3034	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3035, 36	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3037	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3038, 39	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3040	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3041	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3042	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3043	ECEV1HV3R3Q	E.CAPACITOR CH 50V 3.3U	1	
C3044	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3045	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3046	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3047	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3048	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3049	ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C3050	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3051	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3052	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3053	ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C3054, 55	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3056	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C3057	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C3059	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3060	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3061	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3062	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3063	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3064	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3065	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3066	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3067	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3068	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3069	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C3070	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3071	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3072	ECUX1E681JCV	C.CAPACITOR CH 25V 680P	1	
C3073	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3074	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3075	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3601	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3602	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3603	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3604	ECUX1H390JC	C.CAPACITOR CH 50V 39P	1	
C3605-08	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C3609	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3610	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3612, 13	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3614	ECUX1H101GCV	C.CAPACITOR CH 50V 100P	1	
C3615	ECUX1H151GCV	C.CAPACITOR CH 50V 150P	1	
C3617	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3618	ECUX1H471GCV	C.CAPACITOR CH 50V 470P	1	
C3619	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3620	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3621	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3623	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3624	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3626	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	

Ref.No.	Part No.	Part Name & Descriptior	Pcs	Remarks
C3627	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C3628	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3629	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3631,32	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3633	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3634	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3635	ECEV1HV3R3Q	E.CAPACITOR CH 50V 3.3U	1	
C3636	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3637	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3638,39	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3640	ECUX1C683KBV	C.CAPACITOR CH 16V 0.068U	1	
C3641	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C3642	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3643,44	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3645	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C3646	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3647	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
C3648	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3649,50	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	2	
C3651	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C3652	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3653	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3654	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3655	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3656	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3657	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3658	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3659	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C3661	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3662	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3663	ECQV1H683JM	P.CAPACITOR 50V 0.068U	1	
C3664	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C3665	ECQV1H154JM	P.CAPACITOR 50V 0.15U	1	
C3666	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C3667	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3668	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3669-71	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C3672	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3673	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3674	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3675	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3676	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C3677	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3678	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C3679,80	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3681	ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C3682	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3683	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3685	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3686	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3687,88	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	2	
C3689	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3690	ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C3691	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3692-95	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C3696	ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C3697	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3698	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3699	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3700	ECEV1HV100Q	E.CAPACITOR CH 50V 10U	1	
C3701	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3702	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3801	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3802	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3803	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3804	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3805	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3806	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3808	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3809	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3810	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3811	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3812	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3813	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3814	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	

Ref.No.	Part No.	Part Name & Descriptior	Pcs	Remarks
C3815	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3816	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3817	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3818	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3819	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3820	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3821	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3822	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3823-25	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	3	
C3826	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C3827	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3828	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C3829,30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3831	ECUX1H562KBV	C.CAPACITOR CH 50V 5600P	1	
C3832	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3833-54	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	22	
D3001-03	MA142K	DIODE	3	
D3604	MA142WK	DIODE	1	
D3605-08	MA142K	DIODE	4	
D3609	MA721	DIODE	1	
D3610	MA715	DIODE	1	
D3611	MA142K	DIODE	1	
D3802,03	MA142WK	DIODE	2	
D3804	MA142K	DIODE	1	
D3806	MA142K	DIODE	1	
D3807,08	MA717	DIODE	2	
D3809	MA142K	DIODE	1	
DL3001	VLD0387-T	DELAY	1	
FL3601	ELB4C075	FILTER	1	
FL3602	VLF1504	FILTER	1	
FL3801	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
FL3802,03	VLF1461B223	LINE FILTER	2	
FL3805,06	VLF1461B223	LINE FILTER	2	
FL3808-10	VLF1461B223	LINE FILTER	3	
FL3811	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
FL3812	VLF1461B223	LINE FILTER	1	
FL3814,15	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
IC3001	PQ30RV31	IC	1	
IC3002	UPC2405AHF	IC	1	
IC3003	M52083FP	IC	1	
IC3004	TC7S04FU	IC	1	
IC3601	M52373BFP	IC	1	
IC3602	M52065FP	IC	1	
IC3603	TC7S02FU	IC	1	
IC3604	NJM2233BMA	IC	1	
IC3605	AN1358S	IC	1	
IC3606	TC74HC123AF	IC	1	
IC3607	TC4W53FU	IC	1	
IC3801	TC7S02FU	IC	1	
IC3802	TC7S32FU	IC	1	
IC3803,04	TC7SHU04FU	IC	2	
IC3805	PST591DMT	IC	1	
IC3806	TC7S04FU	IC	1	
IC3807	M24C01-WMN6T	IC	1	
IC3808	MN67152	IC	1	
IC3809	SC371024CFU	IC	1	
IC3810	TC7S00FU	IC	1	
IC3811	TC7S02FU	IC	1	
IC3812	TC7S04FU	IC	1	
IC3813,14	TVHC574FT	IC	2	
IC3815	F432536CPH	IC	1	
IC3816	TC7S32FU	IC	1	
IC3817	MN7A097B2C	IC	1	
IC3818	TVHC574FT	IC	1	
IC3819	MN47V77SP	IC	1	
IC3820	TVHC541FT	IC	1	
L3002	VLQ0163J390	COIL 39UH	1	
L3004	VLQ0163J330	COIL 33UH	1	
L3005	VLQ0163J150	COIL 15UH	1	
L3006	VLQ0163J390	COIL 39UH	1	

Ref. No.	Part No.	Part Name & Descriptio	Pcs	Remarks
L3007	VLQ0163J100	COIL 10UH	1	
L3008	VLQ0163J270	COIL 27UH	1	
L3009	VLQ0163J5R6	COIL 5. 6UH	1	
L3010	VLQ0163J151	COIL 150UH	1	
L3011	VLQ0163J181	COIL 180UH	1	
L3012	VLQ0163J560	COIL 56UH	1	
L3013	VLQ0163J181	COIL 180UH	1	
L3014	VLQ0163J151	COIL 150UH	1	
L3015	VLQ0163J3R9	COIL 3. 9UH	1	
L3016	VLQ0163J270	COIL 27UH	1	
L3017	VLQ0163J4R7	COIL 4. 7UH	1	
L3018	VLQ0163J820	COIL 82UH	1	
L3019	VLQ0133J271	COIL 270UH	1	
L3020	VLQ0163J6R8	COIL 6. 8UH	1	
L3021	VLQ0163J101	COIL 100UH	1	
L3022	VLQ0163J120	COIL 12UH	1	
L3023	VLQ0319K220	COIL 22UH	1	
L3601	VLQ0163J6R8	COIL 6. 8UH	1	
L3602, 03	VLQ0163J560	COIL 56UH	2	
L3604	VLQ0319K220	COIL 22UH	1	
L3606	VLQ0319K220	COIL 22UH	1	
L3607	VLQ0163J101	COIL 100UH	1	
L3609	VLQ0319K220	COIL 22UH	1	
L3610	VLQ0163J330	COIL 33UH	1	
L3611	VLQ0163J560	COIL 56UH	1	
L3612	VLQ0133J821	COIL 820UH	1	
L3613, 14	VLQ0133J681	COIL 680UH	2	
L3615	VLQ0163J120	COIL 12UH	1	
L3616	VLQ0133J331	COIL 330UH	1	
L3617	VLQ0163J151	COIL 150UH	1	
L3618-21	VLQ0319K220	COIL 22UH	4	
L3622, 23	VLQ0163J151	COIL 150UH	2	
L3624	VLQ0163J150	COIL 15UH	1	
L3625	VLQ0319K220	COIL 22UH	1	
L3801, 02	VLP0192	COIL	2	
L3803-08	VLP0196	COIL	6	
L3809	VLP0146	COIL	1	
P3001	VJP3176B050	CONNECTOR (MALE)	1	
P3002	VJP3079	CONNECTOR (MALE)	1	
Q3001	2SB1218A-R	TRANSISTOR	1	
Q3002	2SD1330	TRANSISTOR	1	
Q3003	2SC3930-B	TRANSISTOR	1	
Q3004, 05	2SB1218A-R	TRANSISTOR	2	
Q3006	2SC3930-B	TRANSISTOR	1	
Q3007, 08	2SD1819A-R	TRANSISTOR	2	
Q3009	2SB1218A-R	TRANSISTOR	1	
Q3010	2SD1819A-R	TRANSISTOR	1	
Q3011	2SB1218A-R	TRANSISTOR	1	
Q3012	2SD1819A-R	TRANSISTOR	1	
Q3013	2SC3930-B	TRANSISTOR	1	
Q3014-16	2SD1819A-R	TRANSISTOR	3	
Q3601	XN1501	TRANSISTOR-RESISTOR	1	
Q3602	XN1213	TRANSISTOR-RESISTOR	1	
Q3603	2SC3930-B	TRANSISTOR	1	
Q3604	2SA1532-B	TRANSISTOR	1	
Q3605	2SD1819A-R	TRANSISTOR	1	
Q3606, 07	2SB1218A-R	TRANSISTOR	2	
Q3608	2SD1819A-R	TRANSISTOR	1	
Q3609	2SB1218A-R	TRANSISTOR	1	
Q3610	XN1501	TRANSISTOR-RESISTOR	1	
Q3611	2SC3930-B	TRANSISTOR	1	
Q3612	2SA1532-B	TRANSISTOR	1	
Q3613	2SD1819A-R	TRANSISTOR	1	
Q3614-16	2SC3930-B	TRANSISTOR	3	
Q3617, 18	2SB1218A-R	TRANSISTOR	2	
Q3619	2SD1819A-R	TRANSISTOR	1	
Q3801-03	2SB1218A-R	TRANSISTOR	3	
Q3804	2SA1532-B	TRANSISTOR	1	
Q3805	2SD1819A-R	TRANSISTOR	1	
QR3001	UN5213	TRANSISTOR-RESISTOR	1	
QR3002	UN5212	TRANSISTOR-RESISTOR	1	
QR3003	UN5213	TRANSISTOR-RESISTOR	1	

Ref. No.	Part No.	Part Name & Descriptio	Pcs	Remarks
QR3004	UN5212	TRANSISTOR-RESISTOR	1	
QR3005-07	UN5211	TRANSISTOR-RESISTOR	3	
QR3602, 03	UN5213	TRANSISTOR-RESISTOR	2	
QR3606, 07	UN5213	TRANSISTOR-RESISTOR	2	
QR3608	UN5211	TRANSISTOR-RESISTOR	1	
QR3609	UN5213	TRANSISTOR-RESISTOR	1	
QR3610	UN5113	TRANSISTOR-RESISTOR	1	
QR3611	UN5115	TRANSISTOR-RESISTOR	1	
QR3612	UN5113	TRANSISTOR-RESISTOR	1	
QR3613, 14	UN5111	TRANSISTOR-RESISTOR	2	
QR3615, 16	UN5215	TRANSISTOR-RESISTOR	2	
QR3617	UN5211	TRANSISTOR-RESISTOR	1	
QR3801	UN5213	TRANSISTOR-RESISTOR	1	
QR3804	UN5213	TRANSISTOR-RESISTOR	1	
QR3806	UN5113	TRANSISTOR-RESISTOR	1	
QR3807, 08	UN5213	TRANSISTOR-RESISTOR	2	
R3301	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3302	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3303	ERJ3RBD621	M. RESISTOR CH 1/16W 620	1	
R3304	ERJ3RBD183	M. RESISTOR CH 1/16W 18K	1	
R3305	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	
R3306, 07	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3308, 09	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R3310	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R3311	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	1	
R3312	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3313	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R3314	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3315	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3317	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3318	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3320, 21	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	2	
R3322	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R3324	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3325	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3326-29	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4	
R3330	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3331	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R3332	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3333	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3334	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3335, 36	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3337	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R3338	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3339	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R3340	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3341	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3342	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3343	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R3344	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5. 6K	1	
R3345	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3346	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	1	
R3347	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3348	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3349	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3350	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2. 7K	1	
R3351	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R3352	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	1	
R3353	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3354	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3355	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3356	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R3357	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3358	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3359	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R3360	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3361	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3362	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R3363	ERJ3RBD431	M. RESISTOR CH 1/16W 430	1	
R3364	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3365, 66	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	2	
R3367	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R3368	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3369	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3370	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3371	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3372	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3374	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3375	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3376, 77	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	2	
R3378	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3379	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3380	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3381	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3382	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3383	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3601	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R3602	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3603	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3604	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3605	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3606, 07	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3608	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	
R3609	ERJ3RBD751	M. RESISTOR CH 1/16W 750	1	
R3610	ERJ3RBD152	M. RESISTOR CH 1/16W 1.5K	1	
R3611	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3612	ERJ3RBD621	M. RESISTOR CH 1/16W 620	1	
R3613	ERJ3RBD182	M. RESISTOR CH 1/16W 1.8K	1	
R3615	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	1	
R3618	ERJ3RBD331	M. RESISTOR CH 1/16W 330	1	
R3619	ERJ3RBD391	M. RESISTOR CH 1/16W 390	1	
R3620	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3621	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3622	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R3623	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3624	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3625	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3626	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3627	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3628	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R3629	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3630	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R3631	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3632	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3633	ERJ3GEYK395	M. RESISTOR CH 1/16W 3.9M	1	
R3634	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3635	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R3636	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3637	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3638	ERJ3GEYJ106	M. RESISTOR CH 1/16W 10M	1	
R3639	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3640	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3641	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3642	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3643	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3644	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3645	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3646, 47	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R3649	ERJ3RBD361	M. RESISTOR CH 1/16W 360	1	
R3650	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3651	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3652	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3653	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R3654	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R3656	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	
R3657	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3658	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R3659, 60	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3661	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3662	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3663	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3664-66	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	3	
R3667	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R3668	ERJ3RBD101	M. RESISTOR CH 1/16W 100	1	
R3669	ERJ3RBD363	M. RESISTOR CH 1/16W 36K	1	
R3670	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3671	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1	
R3672	ERJ3GEYJ242	M. RESISTOR CH 1/16W 2.4K	1	
R3673	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3674	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3675	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3676	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3677	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3678	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3679	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3680	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3681	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3682	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3683	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3684	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3685, 86	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R3687	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3688	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3690	ERJ3RED184	M. RESISTOR CH 1/16W 180K	1	
R3691	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3692	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3694, 95	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R3696	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3697	ERJ3RBD393	M. RESISTOR CH 1/16W 39K	1	
R3698	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1	
R3699	ERJ3RED330	M. RESISTOR CH 1/16W 33	1	
R3700	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3702	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R3703	ERJ3RBD682	M. RESISTOR CH 1/16W 6.8K	1	
R3704	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R3705	ERJ3RBD153	M. RESISTOR CH 1/16W 15K	1	
R3706	ERJ3RBD272	M. RESISTOR CH 1/16W 2.7K	1	
R3707	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3709	ERJ3RBD151	M. RESISTOR CH 1/16W 150	1	
R3710, 11	ERJ3RBD101	M. RESISTOR CH 1/16W 100	2	
R3712	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R3713	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3714	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3715	ERJ3GEYJ824	M. RESISTOR CH 1/16W 820K	1	
R3716	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3717	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3718	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3719, 20	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R3721	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3722	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R3724	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3725	ERJ3RBD751	M. RESISTOR CH 1/16W 750	1	
R3726	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	1	
R3801	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3802	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3803	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3804	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3805	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3806	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3807	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3808	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3809	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3810	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3811	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R3812, 13	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R3814, 15	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	2	
R3816	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3817-22	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	6	
R3825	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3826	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3827	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3828	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3829	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3830, 31	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	2	
R3832	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3833, 34	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	2	
R3835, 36	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R3837	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3838	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R3839	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3840	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3841-43	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	3	
R3844	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3845	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
R3846	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3847	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3848	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3849, 50	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3851	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3852	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3853	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3854, 55	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R3856	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3857	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R3858	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3859	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3860	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3861	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3862	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3863	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3864	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3865	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R3866	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3867	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3868	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3869	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3870	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3873	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3874-76	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R3878	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3879	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3880	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3881-83	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
SW3601	VSS0515	SWITCH	1	
TG3001	VJR0424	TEST POINT	1	
TP3001-04	VJR0424	TEST POINT	4	
TP3005	EYF6CU	TEST POINT	1	
TP3009, 10	EYF6CU	TEST POINT	2	
TP3601	EYF6CU	TEST POINT	1	
TP3603	EYF6CU	TEST POINT	1	
VC3601	VCV0050	TRIMMER	1	
VR3001, 02	VRV0161B202	V.RESISTOR 2K	2	
VR3003	VRV0161B501	V.RESISTOR 500	1	
VR3004	VRV0161B103	V.RESISTOR 10K	1	
VR3005, 06	EVM7JGA00B24	V.RESISTOR 20K	2	
VR3601	VRV0161B102	V.RESISTOR 1K	1	
VR3602	EVM7JGA00B14	V.RESISTOR 10K	1	
VR3603	VRV0161B103	V.RESISTOR 10K	1	
VR3604	EVM7JGA00B14	V.RESISTOR 10K	1	
VR3605	EVM7JGA00B24	V.RESISTOR 20K	1	
X3601	VSX0874	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VMZ2245	VIDEO INSULATION SHEET	1	
	VHN0030	RIVET	3	
	VSC4010	SHIELD CASE (UPPER)	1	
	VSC4011	SHIELD CASE (MIDDLE)	1	
	VZT0045	CUSHION	1	
■	VEP03F36A	VIDEO 2 C.B.A.	1	(RTL)
C3301	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3302	ECA1HM010	E.CAPACITOR 50V 1U	1	
C3303	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	
C3306	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	
C3308	ECA0JM101B	E.CAPACITOR 6.3V 100U	1	
C3309, 10	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3311	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	
C3312	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3314	ECA1EM4R7	E.CAPACITOR 25V 4.7U	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
C3315, 16	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	2	
C3317	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3318	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3319	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C3320-22	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C3323	ECA0JM101B	E.CAPACITOR 6.3V 100U	1	
C3324	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3325	ECUX1C683KBV	C.CAPACITOR CH 16V 0.068U	1	
C3326	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3327	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C3328	ECA1EM330	E.CAPACITOR 25V 33U	1	
C3329	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C3330	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3331	ECUX1H392KBV	C.CAPACITOR CH 50V 3900P	1	
C3332	ECA1HM4R7	E.CAPACITOR 50V 4.7U	1	
C3333	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C3334	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3335	ECA0JM101B	E.CAPACITOR 6.3V 100U	1	
C3336	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C3337, 38	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3339	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3340	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3341	ECA1HMR47	E.CAPACITOR 50V 0.47U	1	
C3342	ECA1HMR22	E.CAPACITOR 50V 0.22U	1	
C3343	ECA1EM4R7	E.CAPACITOR 25V 4.7U	1	
C3344	ECA0JM471B	E.CAPACITOR 6.3V 470U	1	
C3345	ECA1CM100	E.CAPACITOR 16V 10U	1	
C3346	ECEA1EN4R7S	E.CAPACITOR 25V 4.7U	1	
C3347	ECA0JM471B	E.CAPACITOR 6.3V 470U	1	
C3348	ECA1EM4R7	E.CAPACITOR 25V 4.7U	1	
C3349	ECA1CM100	E.CAPACITOR 16V 10U	1	
C3350, 51	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3352	ECEA1HN010S	E.CAPACITOR 50V 1U	1	
C3353	ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C3354	ECA0JM101B	E.CAPACITOR 6.3V 100U	1	
C3355, 56	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3357	ECA0JM101B	E.CAPACITOR 6.3V 100U	1	
C3358	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3361	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3362	ECA1EM4R7	E.CAPACITOR 25V 4.7U	1	
C3363	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3364	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3365	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	
C3366	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3501	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3503	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3504	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3506	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3508	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3509	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	
C3510	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3512	ECA0JM101B	E.CAPACITOR 6.3V 100U	1	
C3513	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3514	ECA1CM220	E.CAPACITOR 16V 22U	1	
C3515	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3516	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	
C3517	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3518, 19	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C3521	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3522	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3524	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3525	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3526	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C3527	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C3528	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3529	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3532	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3533	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3534	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3535	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	
C3536	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C3537	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3538	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3539	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C3540	ECA0JM470B	E.CAPACITOR 6.3V 47U	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
C3541	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C3542	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3543	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1	
C3544	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3545	ECUX1H151JCV	C. CAPACITOR CH 50V 150P	1	
C3546, 47	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	2	
C3548	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C3549, 50	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	2	
C3551-54	ECUX1C473KBV	C. CAPACITOR CH 16V 0. 047U	4	
C3555	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3556	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C3557	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3558	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1	
C3559	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
D3301	MA142K	DIODE	1	
D3302	MA142WK	DIODE	1	
D3303	MA142K	DIODE	1	
D3501	MA28W-B	DIODE	1	
FL3501, 02	VLF1133	FILTER	2	
IC3301	UPC2405AHF	IC	1	
IC3302	MN1382-R	IC	1	
IC3303	M50458-001FP	IC	1	
IC3304	AN3296S	IC	1	
IC3305	AN3581S	IC	1	
IC3307	NJM2209M	IC	1	
IC3501	TC7S04FU	IC	1	
IC3503	AN6367S	IC	1	
IC3504, 05	TC74HC123AF	IC	2	
IC3506	AN78N05	IC	1	
IC3507	M52093SP	IC	1	
L3301, 02	VLQ0599J680	COIL 68UH	2	
L3304	VLQ0599J150	COIL 15UH	1	
L3305	VLQ0599J680	COIL 68UH	1	
L3306	VLQ0599J270	COIL 27UH	1	
L3307	VLQ0599J680	COIL 68UH	1	
L3308	VLQ0599J470T	COIL 47UH	1	
L3309, 10	VLQ0599J680	COIL 68UH	2	
L3311	VLQ0599J820	COIL 82UH	1	
L3312	VLQ0599J680	COIL 68UH	1	
L3502, 03	VLQ0599J680	COIL 68UH	2	
L3505	VLQ0599J680	COIL 68UH	1	
P3301	VJP3176B050	CONNECTOR (MALE)	1	
Q3301	2SC3930-B	TRANSISTOR	1	
Q3302	2SA1532-B	TRANSISTOR	1	
Q3303	2SD1819A-R	TRANSISTOR	1	
Q3304	2SB1218A-R	TRANSISTOR	1	
Q3305-09	2SD1819A-R	TRANSISTOR	5	
Q3501	2SB1218A-R	TRANSISTOR	1	
Q3503, 04	2SC3930-B	TRANSISTOR	2	
Q3505	2SD1819A-R	TRANSISTOR	1	
Q3506, 07	2SC3930-B	TRANSISTOR	2	
Q3508	2SB1218A-R	TRANSISTOR	1	
QR3302	UN5213	TRANSISTOR-RESISTOR	1	
QR3501	UN5213	TRANSISTOR-RESISTOR	1	
R3301-03	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	3	
R3304	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3305	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3308	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3309, 10	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R3311	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3312	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R3313	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5. 6K	1	
R3314	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R3315	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3316	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3317	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3318	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
R3319	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3320	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	1	
R3321	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3322	ERJ3GEYJ684	M. RESISTOR CH 1/16W 680K	1	
R3323	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3324	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1. 2K	1	
R3325	ERJ3GEYJ753	M. RESISTOR CH 1/16W 75K	1	
R3326	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R3327	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3328	ERJ3GEYG331	M. RESISTOR CH 1/16W 330	1	
R3329	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3330	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3331	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R3332	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3333	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1. 2K	1	
R3334	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R3335	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1. 2K	1	
R3336	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3337	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3338	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R3339	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3340	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3341	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R3342	ERJ3GEYJ112	M. RESISTOR CH 1/16W 1. 1K	1	
R3343	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3344, 45	ERJ3GEYG750	M. RESISTOR CH 1/16W 75	2	
R3346	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3347	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3348	ERJ3GEYJ564	M. RESISTOR CH 1/16W 560K	1	
R3349	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3350	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2. 7K	1	
R3351	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3352	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3353	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3354	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	1	
R3355	ERJ3GEYG750	M. RESISTOR CH 1/16W 75	1	
R3356	ERJ3GEYG682	M. RESISTOR CH 1/16W 6. 8K	1	
R3357	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3358	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	
R3359	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	1	
R3360	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R3361	ERJ3GEYG682	M. RESISTOR CH 1/16W 6. 8K	1	
R3362	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3363	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	1	
R3364	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R3501, 02	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3503	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3504	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R3505	ERJ3RBD561	M. RESISTOR CH 1/16W 560	1	
R3509	ERJ3RBD201	M. RESISTOR CH 1/16W 200	1	
R3510, 11	ERJ3RBD681	M. RESISTOR CH 1/16W 680	2	
R3512	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3513	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R3514	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1. 8K	1	
R3515	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3516	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3517	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5. 6K	1	
R3518	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3. 9K	1	
R3520	ERJ3GEYG393	M. RESISTOR CH 1/16W 39K	1	
R3521	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3522	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2. 2K	1	
R3523	ERJ3GEYG822	M. RESISTOR CH 1/16W 8. 2K	1	
R3525	ERJ3GEYG393	M. RESISTOR CH 1/16W 39K	1	
R3526	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R3527	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3528	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3529	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3531	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3532	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3535	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3536	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
R3537	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R3538	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3539	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R3540	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
R3542	ERJ3GEYG752	M. RESISTOR CH 1/16W 7.5K	1	
R3543	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3544	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R3545	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3547	ERJ3GEYG153	M. RESISTOR CH 1/16W 15K	1	
R3548	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3549	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3550	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3551	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3552	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3556	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R3557	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3558	ERJ3GEYJ124	M. RESISTOR CH 1/16W 120K	1	
R3561, 62	ERJ3GEYJ824	M. RESISTOR CH 1/16W 820K	2	
R3563	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3565	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
TG3301	VJR0098	TEST POINT	1	
TP3301	VJR0098	TEST POINT	1	
VC3301	VCV0050	TRIMMER	1	
VR3303	EVMEGSA00B52	V. RESISTOR 500	1	
VR3304	EVMEGSA00B14	V. RESISTOR 10K	1	
VR3501-03	EVMEGSA00B54	V. RESISTOR 50K	3	
VR3505	EVMEGSA00B23	V. RESISTOR 2K	1	
X3301	VSX0574	CRYSTAL OSCILLATOR	1	
X3501	VSX0406	CRYSTAL OSCILLATOR	1	
■	VEP000D7A	MOTHER C. B. A.	1	(RTL)
P911, 12	VJS3324	CONNECTOR (FEMALE)	2	
P931, 32	VJS2898A050	CONNECTOR (FEMALE)	2	
P941	VJS2898A050	CONNECTOR (FEMALE)	1	
P961	VEE8576	SYSCON MOTHER CABLE	1	
P962-64	VJP3203A020Z	CONNECTOR (MALE)	3	
P971	VEE8577	CABLE	1	
P972	VJS2889A021	CONNECTOR (FEMALE)	1	
P983	VJS2898A050	CONNECTOR (FEMALE)	1	
P992	VEE8581	RS-232C MOTHER CABLE	1	
P994, 95	VJS3490A10	CONNECTOR (FEMALE)	2	
		MISCELLANEOUS		
	XNG26BFZ	NUT	8	
	XYN26+C8FZ	SCREW	8	
	VWJ0755	MOTHER CARD	1	
■	VEP06921B	FRONT C. B. A.	1	(RTL)
C6701, 02	ECEA1AKS221	E. CAPACITOR 10V 220U	2	
C6703-05	ECEA1HKS220	E. CAPACITOR 50V 22U	3	
C6706	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6707	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6708, 09	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C6710	ECEA1CKS330	E. CAPACITOR 16V 33U	1	
C6711	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C6712	ECEA1CKS330	E. CAPACITOR 16V 33U	1	
C6713	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6714	ECEA1AKS221	E. CAPACITOR 10V 220U	1	
C6715	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6716, 17	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	2	
C6718-20	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	3	
C6721	ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C6722	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6723-25	ECEA1CKS470	E. CAPACITOR 16V 47U	3	
C6726	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C6727, 28	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C6730	ECEA1AKS221	E. CAPACITOR 10V 220U	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
D6702	MA4056	DIODE	1	
D6703	MA701A	DIODE	1	
D6704	MA3300-L	DIODE	1	
D6705, 06	MA153	DIODE	2	
D6707-10	MA152K	DIODE	4	
D6711-22	MA151K	DIODE	12	
D6724	MA151K	DIODE	1	
D6727-35	MA151K	DIODE	9	
D6738	MA701A	DIODE	1	
D6739, 40	MA151K	DIODE	2	
D6741	MA153	DIODE	1	
DP6701	VSL0313	DISPLAY	1	
FL6701	VLF0523	FILTER	1	
IC6701	UPD75236J029	IC	1	
IC6702	MN1382-R	IC	1	
IC6703	MN1382-U	IC	1	
IC6704	UPC393G2	IC	1	
IC6705	UPD6253GS	IC	1	
IC6706	MC74HC4053F	IC	1	
IC6707	NJM2068MD	IC	1	
J6704	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
J6706	VJJ0379	JACK	1	
J6707	VJJ0380	JACK	1	
L6701	VLQEL05K121J	COIL 120UH	1	
L6702, 03	VLQEL05K101J	COIL 100UH	2	
LD6701-04	LN440YCPUV	LED	4	
LD6705	LN41YCPHL	LED	1	
LD6706, 07	LN440YCPUV	LED	2	
LD6709	LN41YCPHL	LED	1	
LD6710, 11	LN340GCP	LED	2	
P6701	VJS2889A021	CONNECTOR (FEMALE)	1	
P6702	VJP3076	CONNECTOR (MALE)	1	
Q6701	2SB709A	TRANSISTOR	1	
Q6702	MSD602-R	TRANSISTOR	1	
Q6703-06	MSB710-R	TRANSISTOR	4	
Q6707-10	MSD601-R	TRANSISTOR	4	
Q6711	MSD602-R	TRANSISTOR	1	
R6701	ERJ14YJ152	M. RESISTOR CH 1/4W 1.5K	1	
R6702	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R6703, 04	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R6705	ERJ6GEYG564	M. RESISTOR CH 1/10W 560K	1	
R6706	ERJ6GEYG681	M. RESISTOR CH 1/10W 680	1	
R6707, 08	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	2	
R6709	ERJ6GEYG564	M. RESISTOR CH 1/10W 560K	1	
R6710, 11	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R6712-16	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	5	
R6717	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	1	
R6718-29	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	12	
R6730-33	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	4	
R6734, 35	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R6736	ERJ6GEYG392	M. RESISTOR CH 1/10W 3.9K	1	
R6737-49	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	13	
R6750	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R6752-59	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	8	
R6760-67	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	8	
R6768-71	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	4	
R6772, 73	ERJ6GEYG511	M. RESISTOR CH 1/10W 510	2	
R6776-82	ERJ14YJ470	M. RESISTOR CH 1/4W 47	7	
R6784-86	ERJ14YJ470	M. RESISTOR CH 1/4W 47	3	
R6787	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R6788	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R6789	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R6790	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R6791	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R6792	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
R6793	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R6794-98	ERJ6GEYG332	M. RESISTOR CH 1/10W 3. 3K	5	
R6799	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R6800	ERJ6GEYG332	M. RESISTOR CH 1/10W 3. 3K	1	
R6801, 02	ERJ6GEYG224	M. RESISTOR CH 1/10W 220K	2	
R6803	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R6804	ERJ6GEYF124	M. RESISTOR CH 1/10W 120K	1	
R6805	ERJ6GEYG753	M. RESISTOR CH 1/10W 75	1	
R6806	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R6807	ERJ6GEYG330	M. RESISTOR CH 1/10W 33	1	
R6809	ERJ6GEYG182	M. RESISTOR CH 1/10W 1. 8K	1	
R6810-12	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	3	
R6813	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R6814	ERJ6GEYJ2R2	M. RESISTOR CH 1/10W 2. 2	1	
SW6701-12	EVQQSB04B	SWITCH	12	
SW6714	EVQQSB04B	SWITCH	1	
SW6716, 17	VSS0395	SWITCH	2	
SW6718, 19	EVQQSB04B	SWITCH	2	
SW6720	VSS0220	SWITCH	1	
SW6721-23	VSS0395	SWITCH	3	
VR6701, 02	EVUF3AF15B24	V. RESISTOR 20K	2	
VR6703	EVJYB0F15C23	V. RESISTOR 2K	1	
X6701	VSX0140	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSQ0651	JOG/SHUTTLE ENCODER	1	
	VGU6510	LED HOLDER	2	
	VJF1088	DISPLAY HOLDER	1	
	VMP4258	FRONT MIC	2	
	VMX1658	SPACER	4	
	VZT0045	CUSHION	1	
	XYE3+EF6	SCREW	1	
	XTV3+6F	SCREW	2	
■	VEP05162Q	HEAD AMP C. B. A.	1	(RTL)
C5001	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C5002, 03	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C5004	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C5005	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C5006-08	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	3	
C5009	ECUX1H182JN	C. CAPACITOR CH 50V 1800P	1	
C5010	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C5011	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C5012	ECUM1H473ZFN	C. CAPACITOR CH 50V 0. 047U	1	
C5013	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C5014	ECEA0JKA470	E. CAPACITOR 6. 3V 47U	1	
C5015	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C5016	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C5017	ECUM1H080DCN	C. CAPACITOR CH 50V 8P	1	
C5018, 19	ECUM1C224ZFN	C. CAPACITOR CH 16V 0. 22U	2	
C5020	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C5021	ECUM1H080DCN	C. CAPACITOR CH 50V 8P	1	
C5022	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C5023	ECUX1H020DCN	C. CAPACITOR CH 50V 2P	1	
C5024, 25	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C5026	ECUX1H020DCN	C. CAPACITOR CH 50V 2P	1	
C5027	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C5028	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	1	
C5029	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C5030	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C5031	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C5032, 33	ECUM1E104ZFN	C. CAPACITOR CH 25V 0. 1U	2	
C5034	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C5035	ECEA0JKA470	E. CAPACITOR 6. 3V 47U	1	
C5036	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C5037, 38	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	2	
C5039, 40	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C5042	ECEA1HKA010	E. CAPACITOR 50V 1U	1	

Ref. No.	Part No.	Part Name & Descriptior	Pcs	Remarks
C5043	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C5044, 45	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C5046	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C5047	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C5048	ECUM1H472ZFN	C. CAPACITOR CH 50V 4700P	1	
C5056, 57	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C5058	VCYE1C104MR1	S. CAPACITOR 16V 0. 1U	1	
C5059	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C5060	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C5061	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C5062	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C5063	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C5066	ECUM1C224ZFN	C. CAPACITOR CH 16V 0. 22U	1	
D5001, 02	MA151K	DIODE	2	
D5004	MA151K	DIODE	1	
IC5001	AN3334K	IC	1	
IC5002	BA7740FS	IC	1	
IC5003	AN3370K	IC	1	
L5001-04	VLQ0460	COIL	4	
L5007	VLQ0460	COIL	1	
L5008	VLQ0188J5R6K	COIL 5. 6UH	1	
P5001	VJP3091	CONNECTOR (MALE)	1	
P5002	VJS2603	CONNECTOR (FEMALE)	1	
P5003	VJP3091	CONNECTOR (MALE)	1	
Q5001	MSB709-R	TRANSISTOR	1	
Q5002	MSC2295-B	TRANSISTOR	1	
Q5003	XN4504	TRANSISTOR-RESISTOR	1	
Q5004, 05	MSC2295-B	TRANSISTOR	2	
QR5001	MUN2213	TRANSISTOR-RESISTOR	1	
R5001	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	1	
R5003	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R5004	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R5005	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R5006	ERJ6GEYG152	M. RESISTOR CH 1/10W 1. 5K	1	
R5007	ERJ6GEYG122	M. RESISTOR CH 1/10W 1. 2K	1	
R5008	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R5009	ERJ6GEYG471	M. RESISTOR CH 1/10W 470	1	
R5010	ERJ6GEYJ1R0	M. RESISTOR CH 1/10W 1	1	
R5011-14	ERJ6GEYG182	M. RESISTOR CH 1/10W 1. 8K	4	
R5015-18	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	4	
R5019	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R5020, 21	ERJ6GEYG332	M. RESISTOR CH 1/10W 3. 3K	2	
R5022	ERJ6GEYG152	M. RESISTOR CH 1/10W 1. 5K	1	
R5026	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R5027	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1	
R5028	ERJ6GEYG243	M. RESISTOR CH 1/10W 24K	1	
R5029	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	1	
R5030	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	1	
R5031	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R5032	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R5033	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	1	
R5034	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	1	
R5036	ERJ6GEYG332	M. RESISTOR CH 1/10W 3. 3K	1	
R5037, 38	ERJ6GEYG152	M. RESISTOR CH 1/10W 1. 5K	2	
R5039	ERJ6GEYG332	M. RESISTOR CH 1/10W 3. 3K	1	
R5040	ERDS2TJ221	C. RESISTOR 1/4W 220	1	
R5041-43	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	3	
R5044, 45	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R5046, 47	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	2	
R5056	ERJ6RBD182	M. RESISTOR CH 1/10W 1. 8K	1	
R5057	ERJ6RBD332	M. RESISTOR CH 1/10W 3. 3K	1	
R5058	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R5059	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R5060	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R5062	ERDS2TJ221	C. RESISTOR 1/4W 220	1	
R5070	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	1	
TP5001-03	VJR0424	TEST POINT	3	

Ref. No.	Part No.	Part Name & Descriptio	Pcs	Remarks
VR5001	EVN32CA00B23	V.RESISTOR 2K	1	
VR5002	ERDS2T0	C.RESISTOR 1/4W 0	1	
		MISCELLANEOUS		
	VSC3119	SHIELD CASE (MIDDLE)	1	
	VSC3039	SHIELD CASE (UPPER)	1	
	VSC3040	SW SHIELD (MIDDLE)	1	
	VEE8578	CABLE (1)	1	
	VEE8579	CABLE (2)	1	

Ref. No.	Part No.	Part Name & Descriptio	Pcs	Remarks

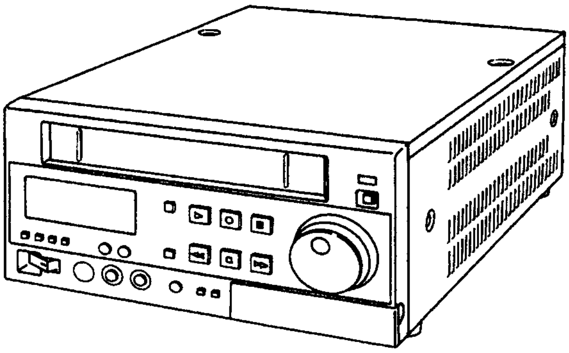
ORDER NO. VSD9408M637

Service Manual

Panasonic S-VHS VHS PAL 625 Hi-Fi

Video Cassette Recorder
AG-MD830E

Sec. 1 *Operating Instructions*
Sec. 2 *Disassembly Procedures*
Sec. 3 *Mechanism*
Sec. 4 *Electrical Adjustments*
Sec. 5 *Block Diagrams*
Sec. 6 *Schematic Diagrams*
Sec. 7 *Circuit Board Diagrams*
Sec. 8 *Exploded Views & Replacement Parts Lists*



SPECIFICATIONS

ITEM		SPECIFICATION
Power	Source	AC 120V ~240V± 10%, 50-60Hz
	Consumption	Approx. 35Watts
Television Format		CCIR Standard(625 lines, 50fields) PAL color signal
Tape Speed		23.39mm/s
Tape Format		S-VHS, VHS
FF/REW Time		Approx. 2.5min. (with 180min. tape)
Operating Condition	Temperature	5℃ - 40℃ (41℉ to 104℉)
	Humidity	35% - 80%
Weight		7.0kg
Video	Heads	4 heads (NOR (49 μm) × 2, SS (35 μm) × 2) 1 flying (rotary) erase head (97 μm)
	Luminance	FM azimuth recording
	Color signal	Converted subcarrier phase shift recording
	Input	LINE (BNC); 1.0Vp-p, 75Ω unbalanced S-VIDEO (4P); Y: 1.0Vp-p, 75Ω unbalanced C: 0.3Vp-p (burst), 75Ω unbalanced
	Output	LINE (BNC); 1.0Vp-p, 75Ω unbalanced S-VIDEO (4P); Y: 1.0Vp-p, 75Ω unbalanced C: 0.3Vp-p (burst), 75Ω unbalanced
	Signal-to-Noise Ratio	VHS; Color; 46dB B/W; 47dB
	Horizontal Resolution	S-VHS; 400 lines VHS; 240 lines

ITEM		SPECIFICATION
Audio	Heads	Normal Audio Control; 1 stationary head 2 ch Hi-Fi Audio; 2 rotary head Erase; 1 full track erase, 1 Audio track erase
	Tracks	Normal audio; 2 track (stereo) Hi-Fi Audio; 2 channels (stereo)
	Input	LINE (PHONO) × 2; −8dB, 47kΩ unbalanced MIC (3.5mm PHONE); −50dBv, 4.7kΩ unbalanced
	Output	LINE (PHONO) × 2; −8dB, 600Ω unbalanced HEADPHONES (PHONE) −60dBv to −20dBv, 8Ω unbalanced MONITOR(PHONO) − 8dBv,600Ω unbalanced
	Frequency Response	Normal; 50Hz to 10kHz Hi-Fi; 20Hz to 20kHz
	Dynamic Range	Hi-Fi; more than 90 dB
	Signal-to-Noise Ratio	Normal; better than 42dB
Dimensions		10-5/8" (W) × 5-3/16" (H) × 14-3/8" (D) 270 (W) × 131.5 (H) × 365.5 (D) mm
Standard Accessories		Power Cable
Optional Accessories		RS-232C Serial Interface ··········· AG-IA823 34-pin Interface ··········· AG-IA34 Remote Controller ··········· AG-A600 Pause Remote Controller ··········· VW-RM1

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

INTRODUCTION

This Service Manual contains all the technical information which will allow service personnel to understand and service the Panasonic S-VHS video cassette recorder model AG-MD830E. This model is developed for applications in industry and medical establishments and in addition, it has an optional accessory RS-232C Interface is a capable of satellite communication.
By the use of S-VHS system, a sharp picture quality with high resolution is obtained, and advanced editing by easy operation is realized by the introduction of highly dependable mechanisms.

Just slightly ahead of our time... Panasonic

CONTENTS

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SAFETYPRECAUTIONS ······ 2
SERVICE INFORMATION ······ 3
SECTION 1 OPERATING INSTRUCTIONS ······ 1-1
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SECTION 3 MECHANISM ······ 3-1
SECTION 4 ELECTRICAL ADJUSTMENTS ······ 4-1
SECTION 5 BLOCK DIAGRAMS ······ BLK-1
SECTION 6 SCHEMATIC DIAGRAMS ······ SCM-1
SECTION 7 CIRCUIT BOARD DIAGRAMS ······ CBA-1
SECTION 8 EXPLODED VIEWS & REPLACEMENT PARTS LISTS ······ PRT-1

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing observe the original lead dress. If a short circuit is found, replac all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protectiv devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs onthe plug.
2. Measur the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwhead connectors, contrl shafts, etc. When the exposed metallic part has a return path to the chassis, the reading shoulb be between 1MΩ and 5.2MΩ.
   When the exposed metal dose not have a return path to the chassis, the reading must be ∞.

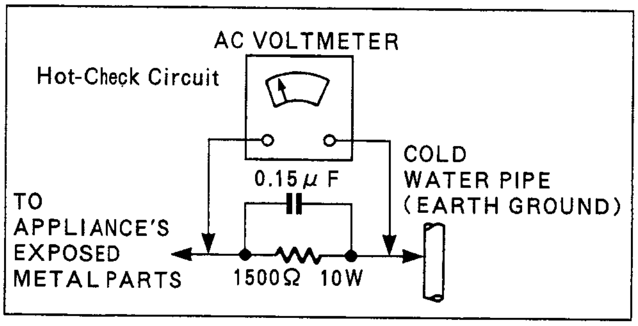


Figure 1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.
2. Connect a 1.5KΩ, 10W resistor, inparallel with 0.15μF capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measur the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possiblity of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE(ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

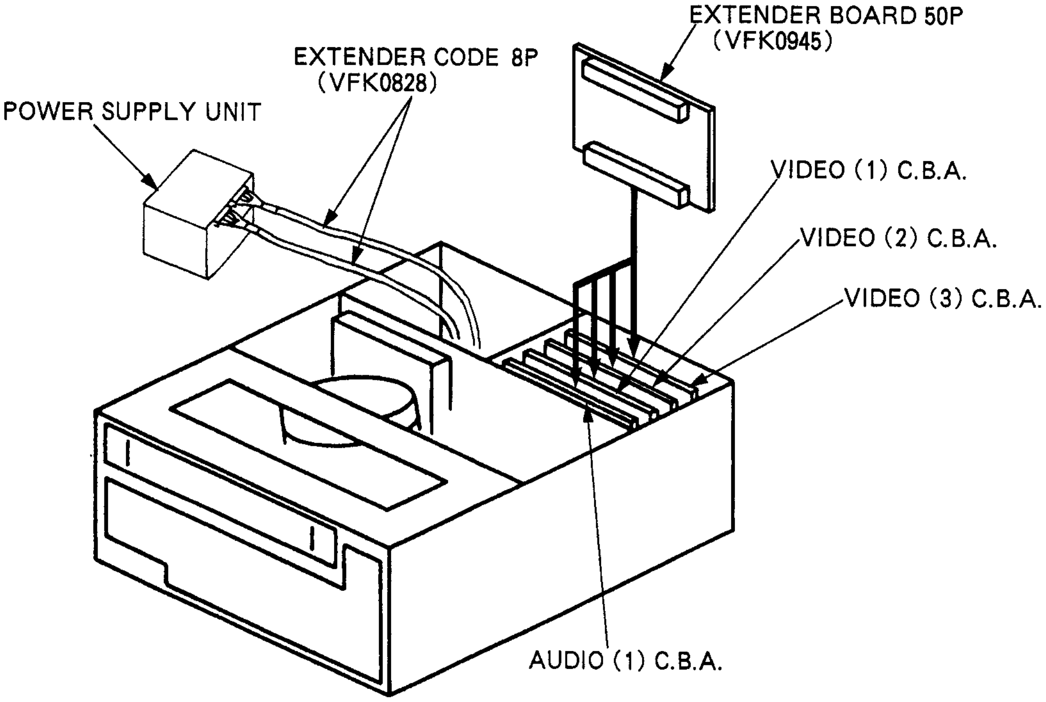
1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package untilimmediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all otner asfety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devoces. (Otherwise harmless mother such as the brushing together of your clothes fabric or the lifting of your foor from a carpeted floor can generate static electricity sufficient to damage an ES device).

SERVICE INFORMATION

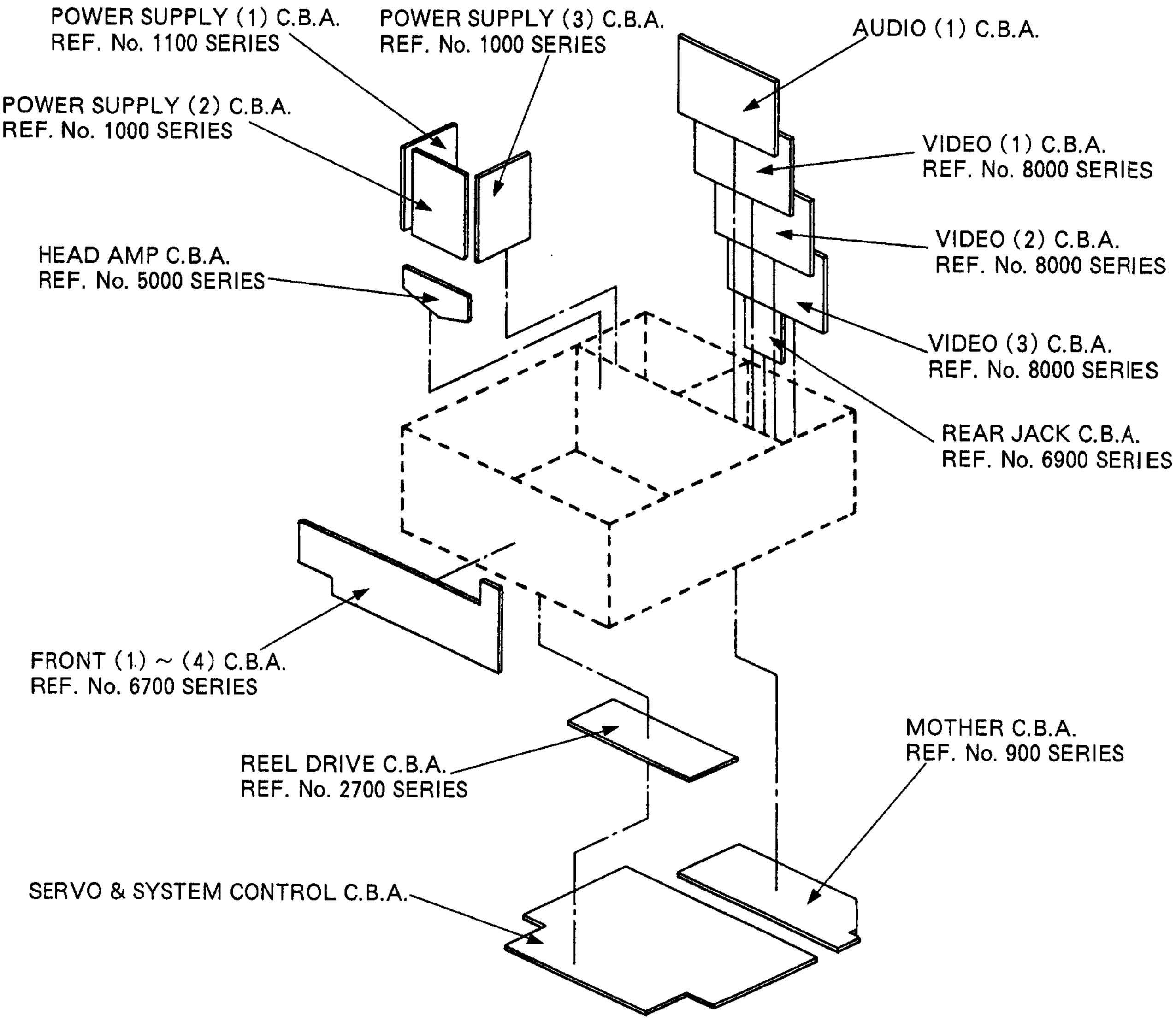
1. EXTENDERS

1. **EXTENDER BOARD 50P (VFK0945) NEW**
   FOR AUDIO (1), VIDEO (1), (2) and (3) P.C. BOARDs

2. **EXTENDER CODE 8P (VFK0828) SAME AS AG-6730 etc.**
   FOR POWER SUPPLY UNIT


EXTENDER BOARD 50P
(VFK0945)
EXTENDER CODE 8P
(VFK0828)
POWER SUPPLY UNIT
VIDEO (1) C.B.A.
VIDEO (2) C.B.A.
VIDEO (3) C.B.A.
AUDIO (1) C.B.A.

2. CIRCUIT BOARD LAYOUT


POWER SUPPLY (1) C.B.A.
REF. No. 1100 SERIES
POWER SUPPLY (3) C.B.A.
REF. No. 1000 SERIES
AUDIO (1) C.B.A.
POWER SUPPLY (2) C.B.A.
REF. No. 1000 SERIES
VIDEO (1) C.B.A.
REF. No. 8000 SERIES
HEAD AMP C.B.A.
REF. No. 5000 SERIES
VIDEO (2) C.B.A.
REF. No. 8000 SERIES
VIDEO (3) C.B.A.
REF. No. 8000 SERIES
REAR JACK C.B.A.
REF. No. 6900 SERIES
FRONT (1) ~ (4) C.B.A.
REF. No. 6700 SERIES
MOTHER C.B.A.
REF. No. 900 SERIES
REEL DRIVE C.B.A.
REF. No. 2700 SERIES
SERVO & SYSTEM CONTROL C.B.A.

SYSTEM CONTROL & SERVO C.B.A.

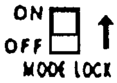
SYSTEM CONTROL SECTION: REF NO. 6000 SERIES
SERVO SECTION: REF. No. 2000 SERIES
CTL AMP SECTION: REF. No. 2300 SERIES
REEL SERVO SECTION: REF. No. 2500 SERIES
MOTER DRIVE SECTION: REF. No. 2300 SERIES
DC-DC CONVERTOR SECTION: REF. No. 2900 SERIES

AUDIO (1) C.B.A.

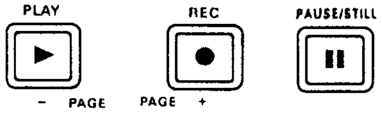
NORMAL AUDIO SECTION: REF. No. 4000 SERIES
Hi-Fi AUDIO SECTION: REF. No. 4000 SERIES

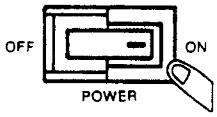
3. INITIALIZE (HOUR METER, MENU SETTINGS)

1. Turn off the Power.
2. Connect a jumper wire between TP8006 on the VIDEO (3) C.B.A. and TP1 on the VIDEO (1) C.B.A.
3. Set the MODE LOCK switch to ON.

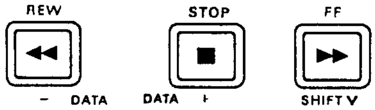

ON
OFF
MODE LOCK

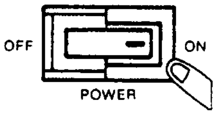
<< HOUR METER RESET >>
Turn on the Power while the PLAY, REC and PAUSE buttons are depressed.


PLAY
REC
PAUSE/STILL
- PAGE
PAGE +

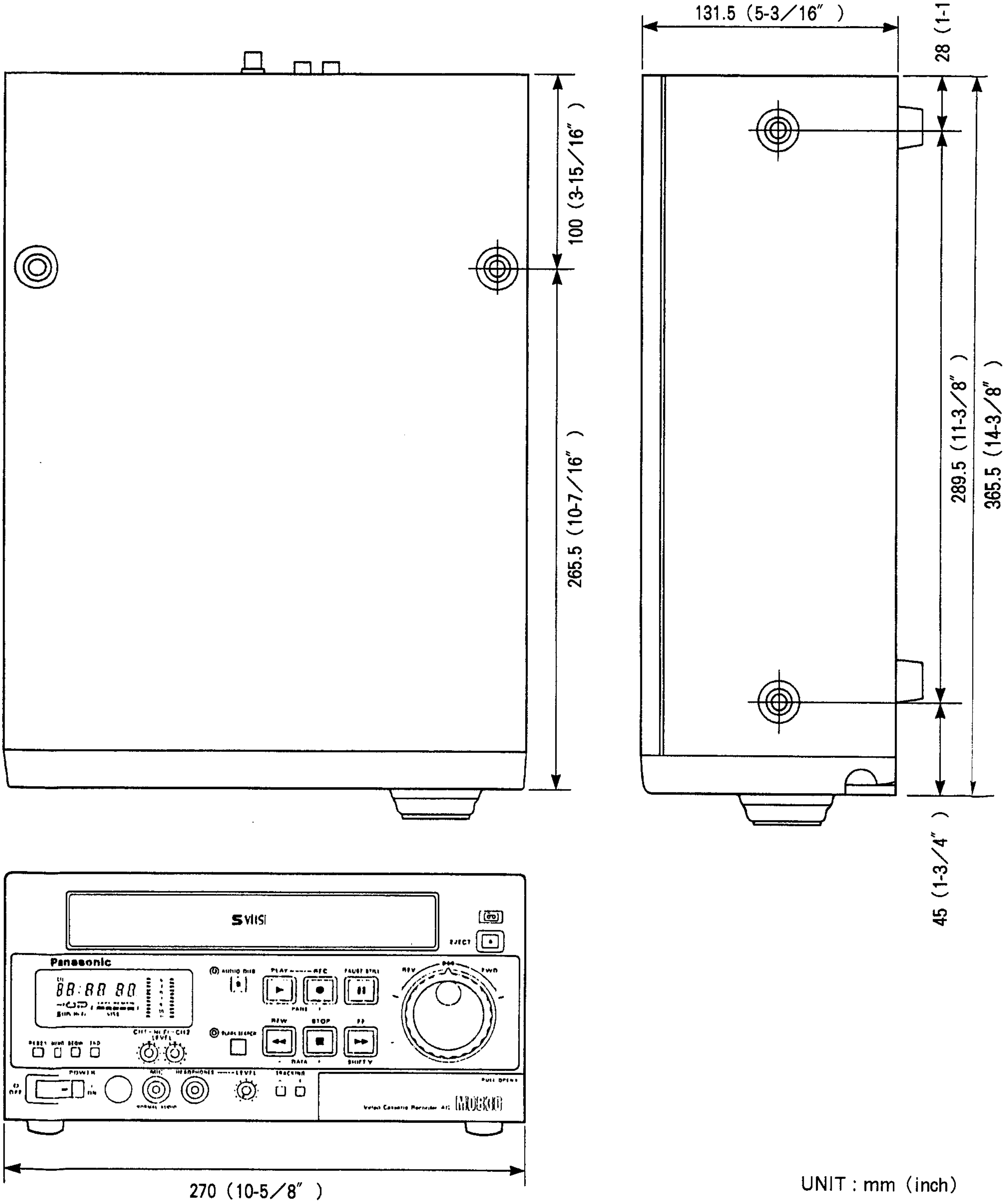

OFF
ON
POWER

<< MENU SETTINGS RESET >>
Turn on the Power while the REW, STOP and FF buttons are depressed.


REW
STOP
FF
- DATA
DATA +
SHIFT V


OFF
ON
POWER

4. DIMENSIONS


131.5 (5-3/16")
28 (1-1/8")
100 (3-15/16")
265.5 (10-7/16")
289.5 (11-3/8")
365.5 (14-3/8")
45 (1-3/4")
270 (10-5/8")
S VHS
Panasonic
EJECT
PLAY
REC
PAUSE/STILL
REW
STOP
FF
REV
FWD
POWER
OFF
ON
MIC
HEADPHONES
LEVEL
TRACKING
MD830

UNIT : mm (inch)

SECTION 1

OPERATING INSTRUCTIONS

CONTENTS

Caution for AC Mains Lead 1-2
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- Rear Panel 1-3

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- Menu Item Settings 1-4

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- Memory Stop 1-5
- Counter Reset 1-5
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- VISS Signal 1-6
- Repeat Playback 1-6

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Playback 1-7
- Preparations 1-7
- Playback 1-7
- Rewinding and Fast Forwarding 1-8
- Search/Jog Playback 1-8
- To Finish Playback 1-8
- Still Playback and Slow-Motion Playback 1-8
- Field-by-Field Playback 1-8
- Unrecorded Blank Search 1-8

Audio Dubbing 1-8

Caution for AC Mains Lead

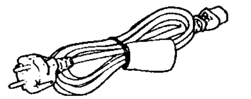
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

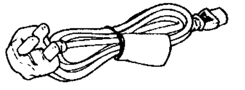
FOR CONTINENTAL EUROPE, ETC.

Not to be used in the U.K.



FOR U.K. ONLY

If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark ◈ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

WARNING: THIS APPLIANCE MUST BE EARTHED.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

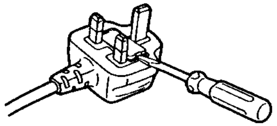
Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

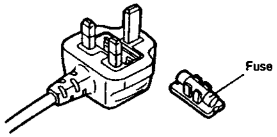
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



Features

Rotary erase head

The rotary erase head is featured to ensure cleaner edits during editing.

Hi-Fi recording
High picture quality
Compactly designed for easy portability
Illuminated operation buttons

Repeat playback

A particular section on the tape can be continuously played back repeatedly or played back once.

Jog and shuttle functions

The unit's jog and shuttle functions enable playback section to be located speedily using the search dial.

Mode locking

Even when an operation button has been pressed in error, the mode lock function prevents the unit from performing the operation corresponding to that button.

Unrecorded blank search

The unit detects unrecorded blanks which are 5 or more seconds in length.

Automatic high-speed VISS search

By writing the VISS (VHS Index Search System) signals at particular scenes to be viewed, the scenes can be easily located and played back automatically.

Audio dubbing

Audio can be added to the normal audio track during post production editing.

Switch settings on screen menus

The unit's on-screen system enables switch settings to be viewed on the TV screen.

Auto head cleaning

This facility automatically cleans the video heads to remove any dirt.

Pause remote control supported

Recording can be started and stopped by remote control using the VW-RM1 which is available as an optional accessory.

RS-232C serial interface supported

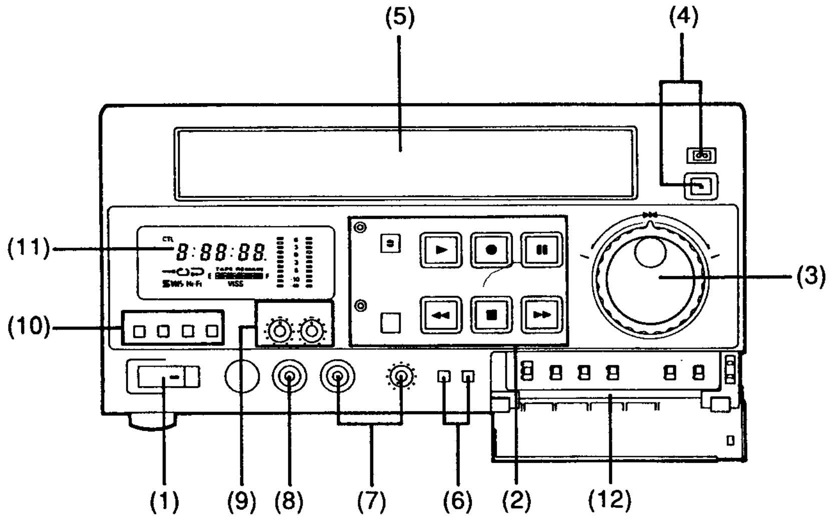
The unit can be remote-controlled from a personal computer by mounting the AG-IA823 interface which is available as an optional accessory.

34-pin remote control supported

The unit can be operated from a distance of 5 meters or so using the AG-A600 (an optional accessory) by installing the AG-IA34 interface which is available as an optional accessory.

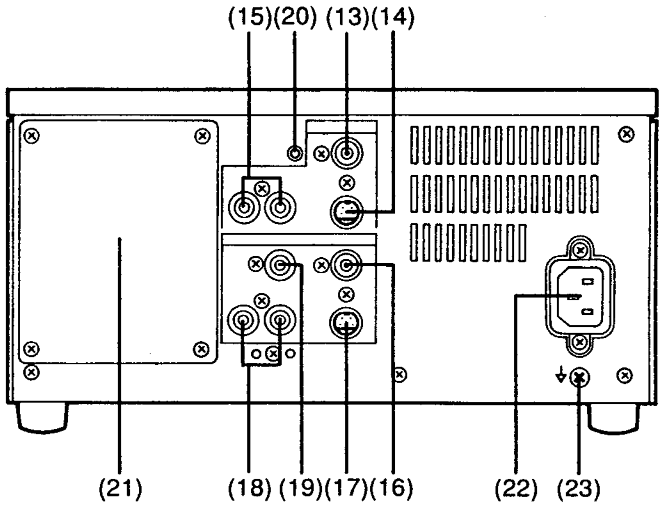
Controls

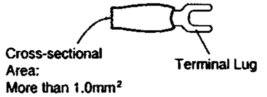
Front Panel



No.	Name	Page	No.	Name	Page
1	Power switch	—	8	Microphone jack (mini jack)	E-14
2	Operation buttons STOP, PLAY, REC, REW, FF, PAUSE/STILL, AUDIO DUB, BLANK SEARCH	E-11 – E-17	9	Hi-Fi audio level control CH1/CH2	E-14
			10	Counter setting buttons	E-11
			11	Counter/audio level meter	E-11
3	Search dial	E-16	12	Setting switch section	
4	Eject button/tape indicator	—		AUDIO OUT selector	E-15
5	Cassette holder	—		METER/AUDIO OUT switch (Hi-Fi/NORMAL)	E-14
6	Tracking buttons	E-16		VIDEO INPUT selector (S-VIDEO/LINE)	E-14
7	Headphones jack (mini jack)/ Headphone level control	E-14		S-VHS REC MODE selector (AUTO/OFF)	E-14
				MENU screen selector (SET/OFF)	E-8
				MODE LOCK switch (ON/OFF)	E-15

Rear Panel



No.	Name	Page	No.	Name	Page
13	VIDEO input connector (BNC)	E-14	23	Equipotential terminal ⏚ When connecting this unit to any other component, make absolutely sure that it is properly grounded by connecting this terminal. When connecting, use the terminal lug, and be sure to used wire with a cross-sectional area of at least 1.0 mm².  	—
14	S-VIDEO input connector (4P)	E-14			
15	AUDIO CH1/CH2 input connectors (PHONO)	E-14			
16	VIDEO output connector (BNC)	E-15			
17	S-VIDEO output connector (4P)	E-15			
18	AUDIO CH1/CH2 output connectors (PHONO)	E-15			
19	AUDIO MONITOR output connector	—			
20	PAUSE REMOTE connector	E-18			
21	Blank panel or RS-232C/34-pin options	E-18			
22	Power socket	—			

Menu Screens

The menu settings can be performed while monitoring the TV screen or the level meter.

Setting up your VTR for proper operation.

When you receive your VTR, it will be set up as follows:

MENU A

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
1001:00	VISS	OFF
1002:00	TAPE SELECT	- - E180
1003:01	AUTO BACK	ON
1004:00	TAPE IN MODE	STOP
1005:01	TAPE END MODE	REW
1006:00	REC TAPE END	STOP
1007:01	STBY OFF TIME	5 MIN

MENU B

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
1008:01	HI-FI REC	ON
1009:00	AUDIO DUB	CH1.CH2
1010:00	EDIT	OFF
1011:00	NOTCH	OFF

If optional AG-IA823 serial interface board is installed:

MENU C

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
3001:01	BIT LENGTH	8 BIT
3002:00	STOP BIT	STOP-1
3003:02	PARITY	NONE
3004:03	BAUD RATE	9600

To reset any of these defaults:

1. Press the STOP Button to place the VTR into the stop mode.
2. Set the MENU Switch to the SET position (switch is located under door on front panel).
   NOTE: When in the menu set position PLAY, REC, FAST FORWARD and REW will not function.
3. You can change these settings either by watching the counter indicator on the VTR or by watching the video monitor.
4. To change the individual default settings use the PLAY or REC buttons to select the different menu pages, which will display the different settings.
5. To select the individual settings either use the FF button or the inside search dial control. A flashing bar will highlight your selection if you are viewing your video monitor. If you use the counter indicator to make these changes, the first four digits select the item you would like to change and the last two selects the default setting (on/off, etc.).
   The counter display codes are on page E-9.
6. To change the default setting use either the STOP or REW buttons.
7. After making the necessary changes, make sure to reset the MENU set switch to OFF.

Operation

Use the operation buttons and search dial as shown below.

STOP
■
DATA +

This moves the selection item cursor forward.

```
00:OFF                00:OFF
01:REC              → 01:REC
02:REC/PAUSE          02:REC & PAUSE
```

REW
◀◀
– DATA

This moves the selection item cursor backward.

```
00:OFF                00:OFF
01:REC              ← 01:REC
02:REC/PAUSE          02:REC/PAUSE
```

PLAY
▶
– PAGE

This returns to the previous menu page.

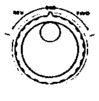
REC
●
PAGE +

This advances to the next menu page.

FF
▶▶
SHIFT V

This moves the menu selection to the item below.

```
TAPE IN MODE      00:STOP
TAPE END MODE     00:STOP
      ↓
TAPE IN MODE      00:STOP
TAPE END MODE     00:STOP
```



This turns the inside search dial (jog function).

Instead of using FF ▶▶ SHIFT V, this can be used to move the menu selection to the item above or below.

```
TAPE IN MODE      00:STOP
TAPE END MODE     00:STOP
      ↓↑
TAPE IN MODE      00:STOP
TAPE END MODE     00:STOP
```

Menu Item Settings

Counter indicator No. (*)	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
1001	VISS	00 : OFF 01 : REC 02 : REC/PAUSE	VISS signal recording and counter memory operation **OFF:** The VISS signal is not recorded (neither is the memory operation based on the VISS signal performed). **REC:** The VISS signal is recorded by pressing the REC and PLAY buttons together during recording. **REC/PAUSE:** The VISS signal is recorded when the recording or recording pause mode is released. "VISS" appears on the display tube when REC or REC/PAUSE is selected.
1002	TAPE SELECT	00 : --E180 01 : E240--	**--E180:** When a tape with a length of 180 minutes or less is used. **E240--:** When a tape with a length of 240 minutes or more is used.
1003	AUTO BACK	00 : OFF 01 : ON	Auto back space recording function setting **ON:** This ensures smooth continuity in recording. (The tape is rewound for approximately one second when the REC Button is pressed in the PLAY/STILL mode or the PAUSE/STILL Button is pressed during recording. When the PAUSE/STILL Button is pressed again, the tape plays back for one second and then recording starts.) **OFF:** Normal REC/PAUSE operation
1004	TAPE IN MODE	00 : STOP 01 : REW	**STOP:** The unit is placed in the stop mode after the tape has been loaded. **REW:** The tape is rewound to its beginning, and then it stops.
1005	TAPE END MODE	00 : STOP 01 : REW	**STOP:** The tape stops when it comes to the end. **REW:** The tape is rewound to its beginning, and then it stops.
1006	REC TAPE END	00 : STOP 01 : EJECT	**STOP:** The tape stops when it comes to the end. **EJECT:** The tape is ejected when it comes to the end.
1007	STBY OFF TIME	00 : 0 MIN 01 : 5 MIN 02 : (30 MIN)	Standby release time **0 MIN:** With full loading STOP, the tape cylinder stops immediately. **5 MIN:** The tape cylinder stops after REC/PAUSE continued for 5 minutes or longer. **30 MIN:** The tape cylinder stops after REC/PAUSE continued for 30 minutes or longer. (Every 5 minutes, however, the tape is advanced in the forward direction by 3 frames.)

---

* This appears along with the figure representing the setting which is indicated on the counter section of the display tube.

Counter indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
1008	HI-FI REC	00 : OFF 01 : ON	Hi-Fi audio recording (Cannot be used for audio DUB) **OFF:** Hi-Fi audio is not recorded. **ON:** Hi-Fi audio is recorded.
1009	AUDIO DUB	00 : CH1.CH2 01 : CH1 02 : CH2	Selection of channel track for audio dubbing **CH1.CH2** : The sound is added to CH1 and CH2 simultaneously. **CH1:** The sound is added to CH1. **CH2:** The sound is added to CH2.
1010	EDIT See Note 1	00 : OFF (regular operation) 01 : ON (editing/dubbing)	Editing/regular operation selection **OFF:** Regular operation **ON:** For editing or dubbing
1011	NOTCH See Note 2	00 : OFF 01 : ON	For setting the NOTCH ON or OFF **OFF:** NOTCH OFF **ON:** NOTCH ON

The items shown below are displayed when the AG-IA823 serial interface board is used.

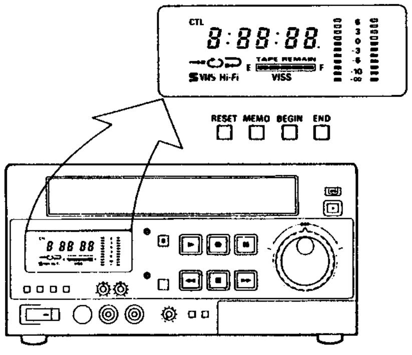
Counter indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
3001	BIT LENGTH	00 : 7BIT 01 : 8BIT	Character length setting **7BIT:** 7 bits **8BIT:** 8 bits
3002	STOP BIT	00 : STOP-1 01 : STOP-2	Stop bit setting **STOP-1:** 1 bit **STOP-2:** 2 bits
3003	PARITY	00 : ODD 01 : EVEN 02 : NONE	Parity bit setting **ODD:** Odd **EVEN:** Even **NONE:** None
3004	BAUD RATE	00 : 1200 01 : 2400 02 : 4800 03 : 9600	Baud rate setting **1200:** 1200 bps **2400:** 2400 bps **4800:** 4800 bps **9600:** 9600 bps

Notes:

1. Edit function: When this is set ON, the noise reduction circuit for the video signals is set OFF. (The video noise will increase slightly. For regular use, EDIT OFF recommended.)

2: NOTCH: When there is high level of noise in the luminance signals, it may also affect the chrominance signals. In a case like this, set the NOTCH to ON. Since the luminance signal band is reduced slightly when the filter is set to ON, the NOTCH OFF position is recommended for regular use.

Counter Section



MEMO ☐ Each time the MEMORY Button is pressed, the mode changes in the following sequence:

→■ Memory stop
↓
1-time memory repeat
↓
Continuous repeat
↓
No indication (OFF)

"VISS"

- This blinks while the VISS signal is being written on the tape.
- It lights when VISS is set on the menu.

Memory Stop

To use the AUTO MEMORY STOP function:

1. Press the MEMORY Button (MEMO)
   To turn on the MEMORY STOP function, the following symbol "→■" will be indicated in the counter display.
2. When the VTR is placed in record a VISS signal will be placed on the video tape.
3. Now when the video tape is rewound or fast forwarded it will stop at the start of any recording.
4. This function can be turned off by pressing the MEMORY Button (MEMO).
5. Repeat playback is covered on page E-13.

Press this to turn on "MEMORY STOP."

Press either REW or FF.

The tape stops automatically at the VISS write point or BGN set point.

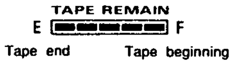
Counter Reset

The counter display is reset to "0:00:00" when the RESET Button is pressed. The BGN/END setting is also set to "0:00:00".

RESET
0:00:00.

Remaining Tape

"TAPE REMAIN" provides a rough indication of the amount of tape remaining. The indication appears about 40 seconds after recording or playback has commenced (it does not appear until this time).



Each lamp going off one after another indicates that the tape is approaching its end.

Note: The remaining tape indicator provides only a rough indication: it is not meant to be precise.

VISS Signal

After VISS has been set on the menu screen, the VISS signal is automatically written on the tape when recording is started.
It can also be written at the desired position on the tape by pressing the REC Button and PLAY Button simultaneously during recording.

- Locating particular scenes to be viewed becomes easy if VISS signals are written with each recording.
- "VISS" blinks on the counter section while the VISS signal is being written.

(1) Select 01 or 02 for VISS on the menu screen.

01: REC
02: REC/PAUSE

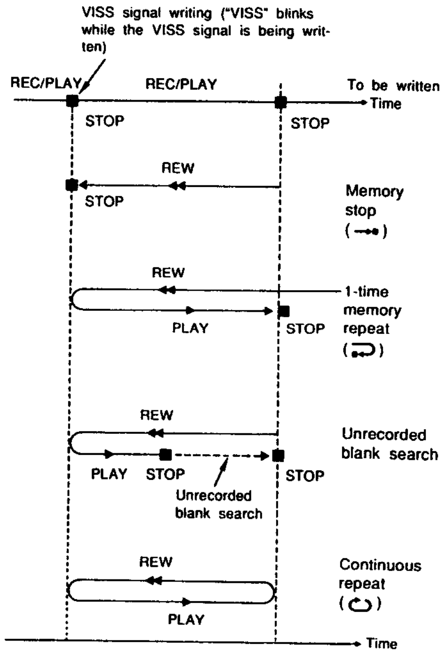
(2) Press the MEMORY Button to establish the memory mode. "VISS" now lights on the counter section.

Memory mode	Display	Function
MEMORY REPEAT	↻	Playback is repeated at the VISS write point.
MEMORY 1 TIME REPEAT	↩	Playback is repeated only once at the VISS write point.
MEMORY STOP	→■	The tape stops at the VISS write point.

(3) Press the FF or REW Button.
When the VISS signal is located, the unit automatically operates in accordance with the memory mode.

- Leave an interval of at least 30 seconds on the tape for writing the VISS signal. (The signal will not be detected if the interval is less than 30 seconds long.)

VISS Setting


VISS signal writing ("VISS" blinks while the VISS signal is being written)
REC/PLAY
REC/PLAY
To be written
Time
STOP
STOP
REW
STOP
Memory stop (→■)
REW
1-time memory repeat (↩)
PLAY
STOP
REW
Unrecorded blank search
PLAY
STOP
Unrecorded blank search
STOP
REW
Continuous repeat (↻)
PLAY
Time

(Leave an interval of at least 30 seconds between VISS signals.)

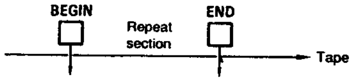
Repeat Playback

(1) Turn VISS function OFF:

1) Press the MEMORY (MEMO) Button and select continuous repeat playback (MEMORY REPEAT ↻) or 1-time repeat playback (MEMORY 1 TIME REPEAT ↩).

Press this and turn on " ↻ " or " ↩ ."

2) Press the BEGIN and END Buttons to set the tape beginning and ending positions for repeat playback.

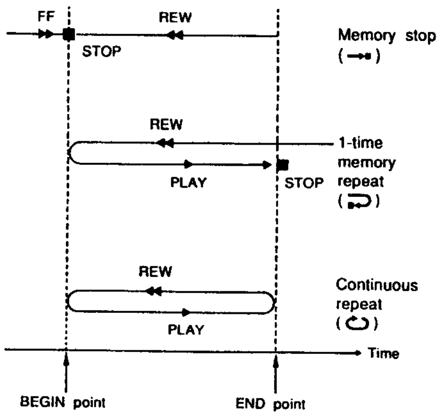

BEGIN
END
Repeat section
Tape

3) Press the FF or REW Button.

(2) While "VISS" is on the display tube:
The VISS signal is used for repeat playback. (Refer to the section on the VISS signal on page E-12.)

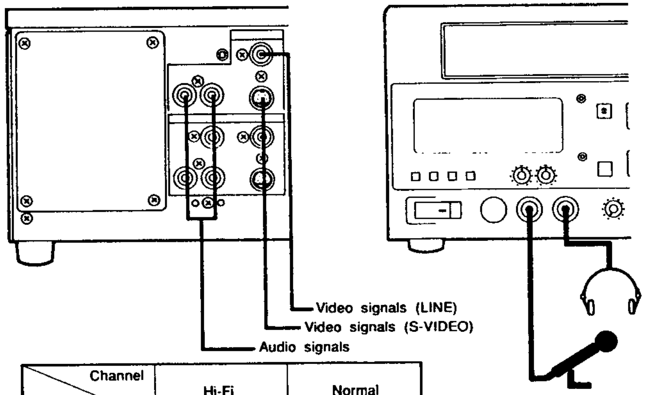
- When the beginning and ending positions are the same, the tape will be repeatedly played back between the beginning position and tape end.
- When the ending position comes after the actual tape end, the tape will be repeatedly played back between the beginning position and tape end.
- When the beginning position comes before the actual tape beginning, the tape will be repeatedly played back between the tape beginning and end position.
- The precision of repeat playback may be impaired when a short section (less than 20 seconds or so long) of the tape is to be repeatedly played back.

BEGIN/END settings (set VISS to OFF on the menu)


FF
REW
STOP
Memory stop (→■)
REW
1-time memory repeat (↩)
PLAY
STOP
REW
Continuous repeat (↻)
PLAY
Time
BEGIN point
END point

(Leave an interval of at least 20 seconds between BEGIN and END.)

Recording



Microphone
(Sound from the microphone is recorded as Hi-Fi audio and normal audio on channel 1.)
Note:
When a microphone has been connected to the MIC jack and audio signals have been connected to the audio connectors for recording, recording from the microphone will take precedence.

Channel / Audio input	Hi-Fi	Normal
L/CH1	L/CH1 *1	L/CH1
R/CH2	R/CH2 *2	R/CH2
L/CH1 & R/CH2	STEREO (L/CH1 & R/CH2)	STEREO (L/CH1 & R/CH2)

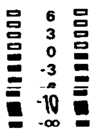
The audio signals are recorded as indicated in the table on the left.
*1: The L/CH1 audio signals are recorded on both channels 1 and 2.
*2: The R/CH2 audio signals are recorded on both channels 1 and 2.

Preparations

- Load the cassette tape. (Check that the accidental erasure prevention tab on the tape is still intact.)
- Check menu for correct set up.
- Set the S-VHS REC MODE selector to the desired position.
  AUTO: At this position, the tape is automatically identified as a VHS or S-VHS tape and the signals are recorded in the corresponding mode.
  OFF: The signals are recorded in the VHS mode regardless of the type of tape used.
- Depending on the connections, set the INPUT Selector to S-VIDEO or LINE.
- When recording Hi-Fi audio, set On-Screen Hi-Fi REC (default setting) to ON.

Audio Level Adjustment (Hi-Fi audio only)

The audio level can be adjusted for Hi-Fi audio only. Turn the Hi-Fi Audio Level Control in such a way that the audio level meter indication is adjusted to around 3 (but not past the 3 level).



Recording

Recording starts when the REC and PLAY Buttons are pressed together or press REC button first and then PLAY. If PLAY button is pressed first, the continued portion is disturbed.

> The REC Button will not operate if the accidental erasure prevention tab on the cassette tape has been broken out. Use a tape with this tab still intact.

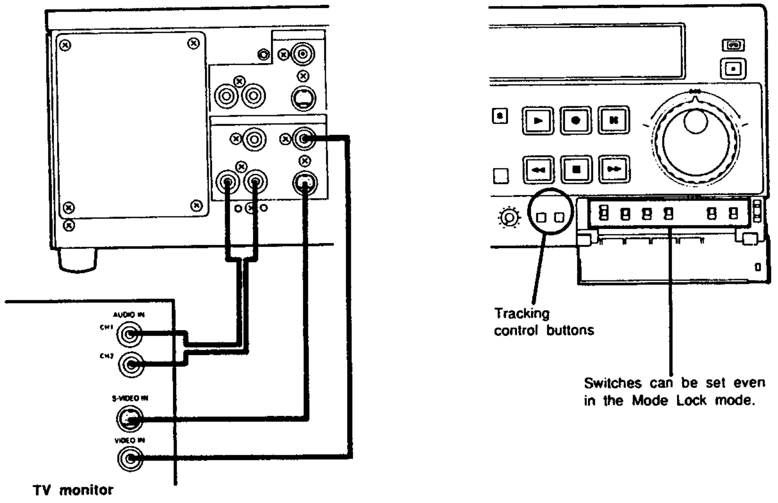
Proceed as follows when using the PAUSE Button.
(1) While playing back the tape, find the location to be recorded. Then press the PAUSE Button.
The unit is now set to the playback pause mode.
(2) Press the REC Button.
The REC Lamp now comes on, and the unit is set to the recording pause mode.
(3) When the PAUSE Button is pressed again, the unit is released from the pause mode, and recording begins.

Audio Monitoring

The audio signals are selected by the AUDIO OUT Selector.
When using headphones, the volume can be adjusted using the Headphone Level Control.

- To reduce the audio level, turn the control counterclockwise; to increase the audio level, turn it clockwise.
  - The audio level may change if high-impedance headphones are connected to the MIC jack.

Playback

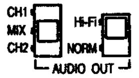


Preparations

- Set the following switches on the unit to OFF.
  Set the MODE LOCK Switch to OFF.
  Press the MEMORY Button to OFF.
- Switch on the power of the units connected to the unit.
- Load the pre-recorded tape.

Audio Monitor Output Selector

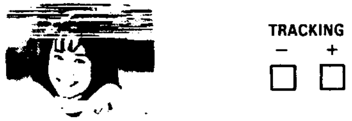
Set the AUDIO OUT Selector to the position corresponding to the type of sound desired.



> **Mode Lock Switch**
>
> This switch makes it impossible to operate the switches on the front panel. When it is set to ON, none of the front panel switch can be operated. However, even with this switch at the ON position, the setting switches inside the cover, the remote controller available as an optional accessory or the RS-232C remote control signals can be used to operate the unit.

Playback

Press the PLAY Button.
Since this unit is equipped with an automatic digital tracking function, there is normally no need to adjust the tracking. However, if noise appears on part of the tracking, playback picture as shown below, press the Tracking "+" or "–" Button on the front panel to obtain a normal picture.
To return to the automatic tracking, press the Tracking "+" and "–" Buttons simultaneously.



- Tracking adjustment may be necessary when playing back a tape which has been recorded on a VTR other than this unit.

> If this unit is brought too close to the TV monitor, interference from the monitor may affect the audio signals, resulting in noise. Be sure to keep the unit at a distance (at least 20 cm or so) from the monitor.

Rewinding and Fast Forwarding

To rewind or fast forward the tape, press the REW Button or FF Button when the tape has stopped moving.

Search/Jog Playback

Search playback (outside ring)

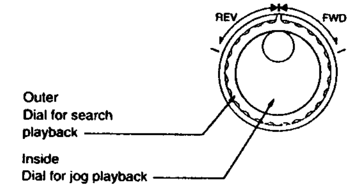
The unit is placed in the search mode by turning the outside ring of the search dial.
A tape can be played back up to 11 times the normal speed.
In the search mode, the FF Lamp (forward direction) or REW Lamp (reverse direction) blinks.

- Set the search dial to its centre click-stop position for still playback.

To release the search mode, press the PLAY, STOP, STILL, FF or REW Button.

Jog playback (inside ring)

The unit is placed in the jog mode when the search dial is set to the search/pause (centre click-stop) position.
When the inside ring is now turned, the tape speed can be varied from −1x to +1x the normal tape speed.
Still playback is established when the inside ring is no longer turned.



- A colour programme may appear in black and white during search or jog playback: this is normal and not indicative of malfunctioning.
- The playback pictures may appear distorted during search or jog playback: this is normal and not indicative of malfunctioning.
- No sound is heard during search or jog playback. Normal sound is heard at a tape speed of 1/2x or higher.

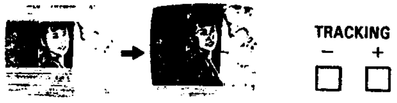
To Finish Playback

Press the STOP Button.

Still Playback and Slow-Motion Playback

The unit is placed in the still picture mode when the search dial is set to its centre click-stop position.

- When noise appears during still playback, proceed with the slow tracking adjustment.



Slow Tracking Adjustment

If noise should appear at the top or bottom of the picture during still playback or slow-motion playback (1/25 to 1/2x normal tape speed), press the Tracking "+" or "−" Button to reduce the noise in the slow-motion playback mode.

- When still playback continues for more than 5 minutes, the unit will be placed automatically in the stop mode in order to protect the video heads.
- No sound is heard during still playback.
- During still playback a colour programme may appear in black or white or the playback image may darken: this is normal and not indicative of malfunctioning.

Field-by-Field Playback

Press the FF or REW Button during still playback. When the FF Button is pressed, the tape is fed by one field in the forward direction; when the REW Button is pressed, it is fed by one field in the reverse direction. When the FF or REW Button is kept depressed, the tape is played back in the forward or reverse direction at approximately 1/25th of the normal speed.

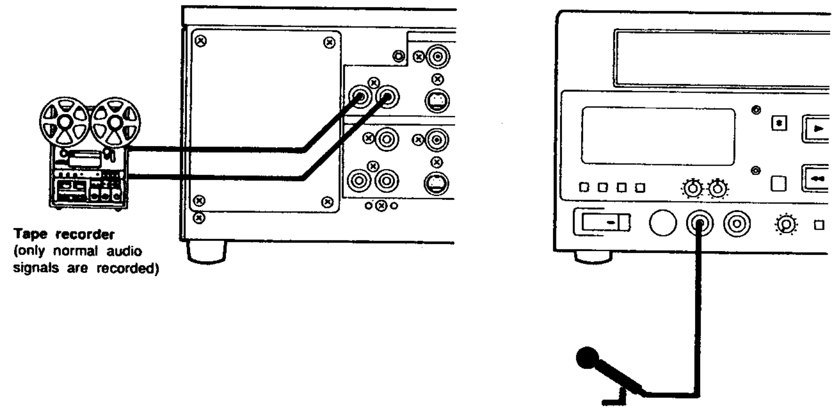
Unrecorded Blank Search

If a tape with unrecorded blanks lasting 5 or more seconds has been loaded, these blanks will be detected automatically.

(1) Load the tape.
(2) Press the BLANK SEARCH Button.
The tape is searched automatically in the forward direction and is stopped automatically when an unrecorded blank lasting 5 or more seconds is detected.

Audio Dubbing

"Audio dubbing" is a function which is used to record sound onto an already recorded tape. Sound can be recorded onto normal audio track CH1 or CH2 or onto both the CH1 and CH2 channels. (It cannot be recorded onto the Hi-Fi audio tracks.)



Tape recorder
(only normal audio signals are recorded)

Microphone
(only normal audio CH1 signals are recorded)

It is not possible to record MIC input audio and audio input signals at the same time. The microphone takes precedence when connections are made to both to the MIC jack and audio connectors.

Preparations

- Load the pre-recorded cassette tape.
(Check that the accidental erasure prevention tab on the tape is still intact. When it has been broken out, the AUDIO DUB Button will not function even if it is pressed.)
- Using AUDIO DUB on the menu screen, select the channels on which the sound is to be added (audio dubbing).

Operation

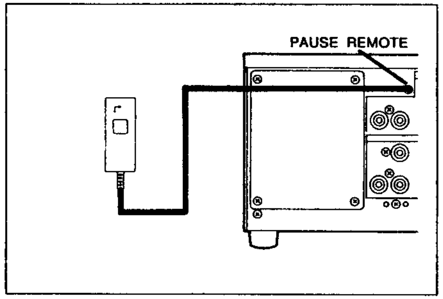
(1) Press the PLAY Button to start playback.
(2) Press the PAUSE/STILL Button where the sound is to be added (audio dubbing) to place the unit in the pause mode.
(3) Press the AUDIO DUB Button.
(4) Audio dubbing starts when the PAUSE/STILL Button is pressed to release the unit from the pause mode.
(5) To stop the audio dubbing, press the STOP Button.

- When audio dubbing is performed, the previously recorded sound will be erased and the new sound will be recorded in its place.
- Bear in mind that howling may occur if audio dubbing is performed with the unit placed near a TV set.
- Audio dubbing cannot be performed when the tape's accidental erasure prevention tab has been broken out.

Remote Controllers

VW-RM1 pause remote controller (optional accessory)

When the VW-RM1 pause remote controller is connected to this unit, recording can be set to the pause mode from a distance instead of using the button on the unit itself.



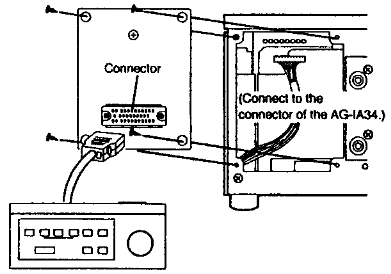
AG-A600 remote controller (optional accessory)

When the AG-IA34 34-pin interface board, available as an optional accessory, is mounted, the unit can be operated by remote control at a distance of about 5 meters instead of the unit's own operation buttons being operated.

- The speed of the playback pictures can be varied up to about 11 times the normal speed in the forward or reverse direction.

Mounting the 34-pin interface board

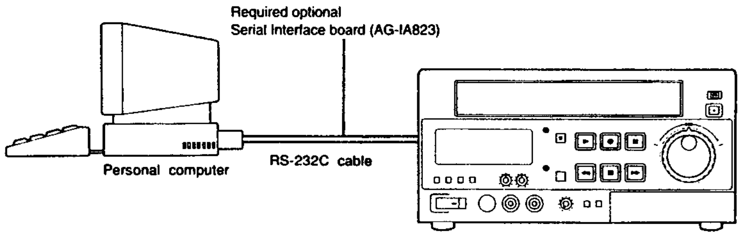
First remove the board mounting plate where the interface board is to be mounted, mount the board, connect the connector and screw the mounting board into place.



AG-A600 remote controller

Computer Remote Control

Using the optional RS-232C serial interface board (AG-IA823) and RS-232C cable, as shown in the figure below, a personal computer can be used to operate the unit in various ways.



Cautions for Use

- Do not insert fingers or any other objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the unit and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, turn the Power OFF and disconnect the power plug from the AC outlet.
- Do not leave a cassette in the unit when not in use.
- Do not block the ventilation slots on the sides of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Keep the VTR away from flower vases, tubs, sinks, etc.
  CAUTION: If liquids should be spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, remove power and consult qualified service personnel.
- Wipe the VTR with a clean, dry cloth. Never use cleaning fluids, chemicals or wax.
- Do not attempt to disassemble the unit. There are no user serviceable parts inside.
- If any liquid spills inside the unit, have the unit examined for possible damage.
- Refer any needed servicing to authorized service personnel.

Cleaning care for video heads

If the screen should appear as shown below, it means that the video heads are dirty. It is recommended that you clean the heads periodically. Use the optional cleaning tape and special purpose cleaning fluid to clean the heads. Consult with your dealer if the symptoms should persist even after cleaning.

Notes:

- We do not recommend that you attempt to clean the video heads yourself.
- Repeated head cleaning will shorten the service life of the video heads.
- Nothing can be recorded on the head cleaning tape.
- If you use cleaning fluid, wipe the cleaned heads with a dry cloth before using the unit.

Dew Indication

When dew is detected, the safety device of this unit will operate in order to protect the cassette tape and video heads.
In case of dew detection, the " d " mark in the counter lights. Wait until the " d " mark goes out with Power switch turned ON to operate the VTR.

" d " mark lights.

Note

Dew condensation normally occurs gradually. Therefore, there may be cases in which the " d " mark does not start flashing until 10 or 15 minutes after dew has begun to condense. In particular, if the temperature or humidity in the room change, wait about 20 minutes before using the unit.

Cause of Condensation

Condensation forms if warm air comes in contact with a cold object, for example on a window in a well-heated room in winter. It may form if the unit or the video cassette is exposed to sudden changes in temperature and humidity such as may occur when the unit or the video cassette is taken from a cold to a warm place.
For instance:

- In a room where the heater has just been turned on in winter;
- In a room with steam or high humidity;
- If the unit or the cassette is brought from cold surroundings into a well-heated room.

Troubleshooting

Check out the points in the table given below, and consult with your dealer if the trouble should persist.

Trouble	Checkpoint/Remedial Action	Ref. Page
No power	• Has the power cable been connected?	-----
No operation even when an operation button is pressed	• Is the power switch in the ON position?	-----
	• Has a cassette tape been loaded?	-----
	• Is " d " displayed indicating condensation lighted? Keep the power supplied to the unit and wait until the " d " in display goes off.	E-19
	• Is the Mode Lock Switch at the OFF position?	E-15
No recording	• Has the tape's accidental erasure prevention tab been broken out?	-----
	• Has the INPUT Selector been set to the proper position?	E-14
Noise appears on playback pictures.	• Press the Tracking Buttons and adjust.	E-15, E-16
No repeat playback	• Has the MEMORY (MEMO) Button been set to the proper position?	E-11
	• Has the counter been reset?	E-11
	• Is the VISS setting on the menu screen at OFF?	E-9
	• Has an interval of at least 20 seconds been given between BEGIN and END?	E-13
No VISS signal writing	• Is the VISS setting on the menu screen at REC or REC/PAUSE?	E-9
	• Has an interval of at least 30 seconds been given between one VISS and another VISS signal?	E-12

Error Display

The following error messages will be displayed on the tape counter if an abnormality occurs in the unit. In this case, follow instructions described below.

■ **When an error code appears:**

- An error code appears on the display.
- All operations are shut down when an error code appears on the display.
- If the error is not released even after taking the remedial action described below, switch off the power, disconnect the power cable from the power outlet, and contact your dealer immediately.

■ **List of error codes**

Error Code	Malfunction	Remedial action
E-2	Malfunction in elevator section	These errors may occur if the video cassette has not been loaded properly. Try switching the power off and turning it back on again.
E-3	Malfunction in loading section	
E-4	Malfunction in cylinder section	These errors may occur if there is something wrong with the state of the video cassette. Try switching the power off and turning it back on again and replacing the video cassette.
E-5	Malfunction in reel section	
E-6	Incorrect tape tension	
E-7	Malfunction in solenoid	Try switching the power off and turning it back on again.

SECTION 2

DISASSEMBLY PROCEDURES

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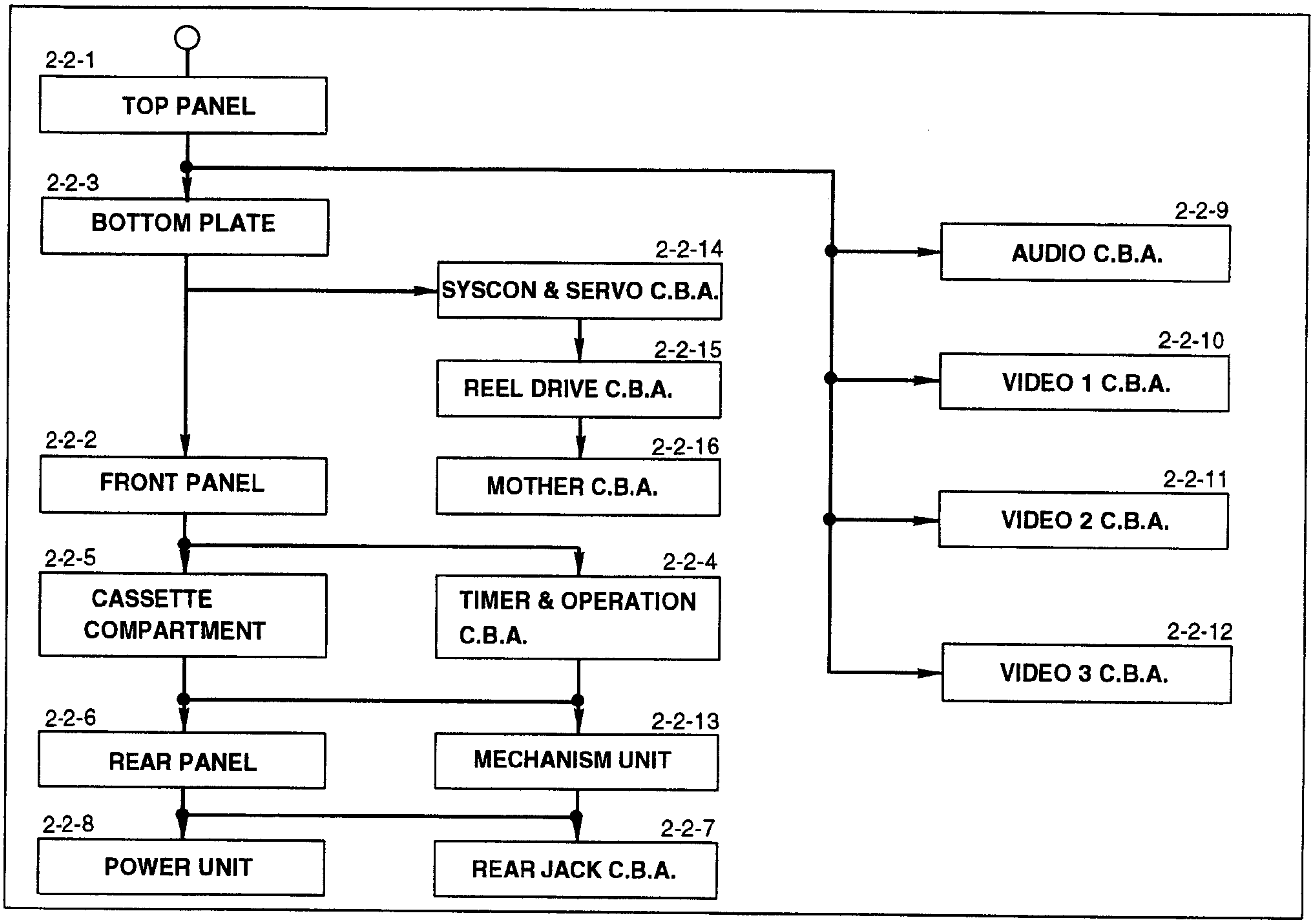
2–1 DISASSEMBLY FLOW CHART


2-2-1
TOP PANEL
2-2-3
BOTTOM PLATE
2-2-14
SYSCON & SERVO C.B.A.
2-2-15
REEL DRIVE C.B.A.
2-2-16
MOTHER C.B.A.
2-2-2
FRONT PANEL
2-2-5
CASSETTE COMPARTMENT
2-2-4
TIMER & OPERATION C.B.A.
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REAR PANEL
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POWER UNIT
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REAR JACK C.B.A.
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AUDIO C.B.A.
2-2-10
VIDEO 1 C.B.A.
2-2-11
VIDEO 2 C.B.A.
2-2-12
VIDEO 3 C.B.A.

Figure D1.

The above flowchart describes the order of steps for rmoving the cabinet parts and certain printed circuit boards in order to gain access to the unit, follow the steps in the reverse order.

2-2 DETAILED DISASSEMBLY METHOD

2-2-1. Removal of the Top Panel

1. Unscrew 2 screws (A) on the Top Panel.
2. Carefully lift the rear of the Top Panel and slide it as shown in the arrow (Figure D 2).

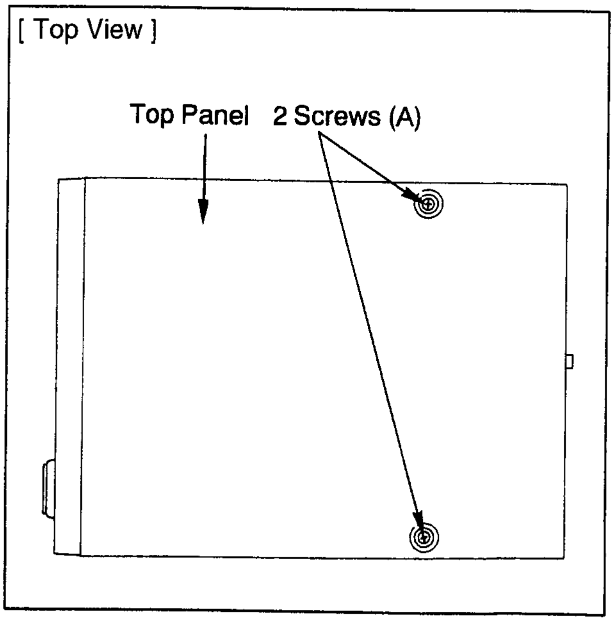
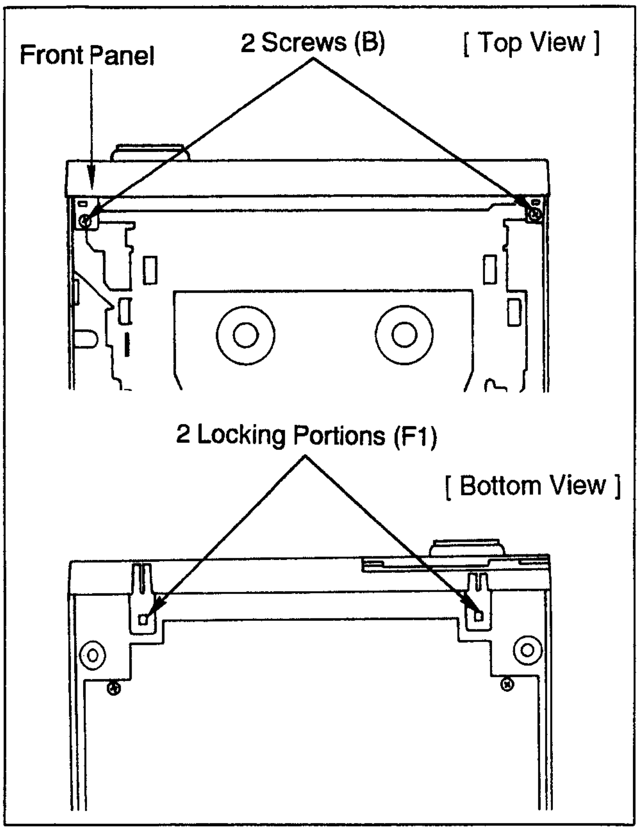

[Top View]
Top Panel
2 Screws (A)

Figure D2

2-2-2 Removal of the Front Panel

1. Remove the Jog Dial on the Front Panel.
2. Unscrew the 2 screws (B) as shown in the Figure.
3. Unlock 2 locking portions (F1), and carefully pull out the Front Panel from the deck (Figure D3.).


Front Panel
2 Screws (B)
[Top View]
2 Locking Portions (F1)
[Bottom View]

Firure D3

2-2-3. Removal of the Bottom Plate

1. Unscrew 6 screws (C)on the Bottom Plate.
2. Lift off the Bottom Plate (Figure D4.).

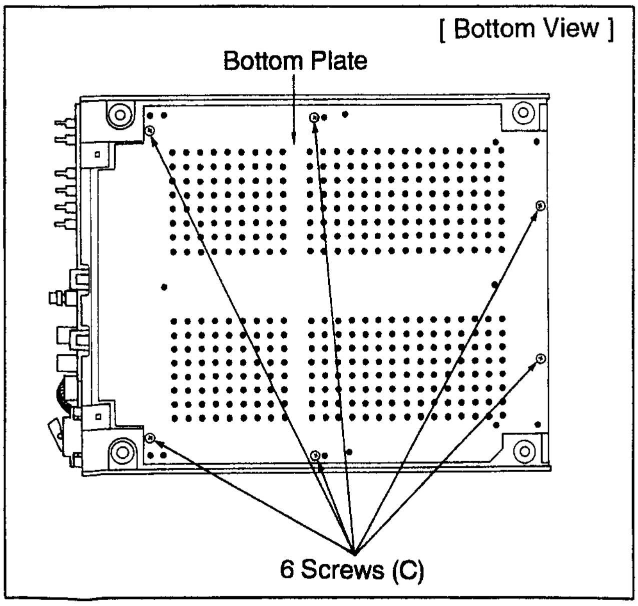

[Bottom View]
Bottom Plate
6 Screws (C)

Figure D4

2-2-4. Removal of the Timer and Operation C.B.A.

1. Disconnect the 2 Flexible Wires from the connector P6701 and P6702 on the Timer and Operation C.B.A..
2. Unscrew the 2 screws (D)and a screw (D-1) on the Timer and Operation C.B.A and unlock 5 locking portions (F2).
3. Carefully remove the Timer and Operation C.B.A. (Figure D5.)

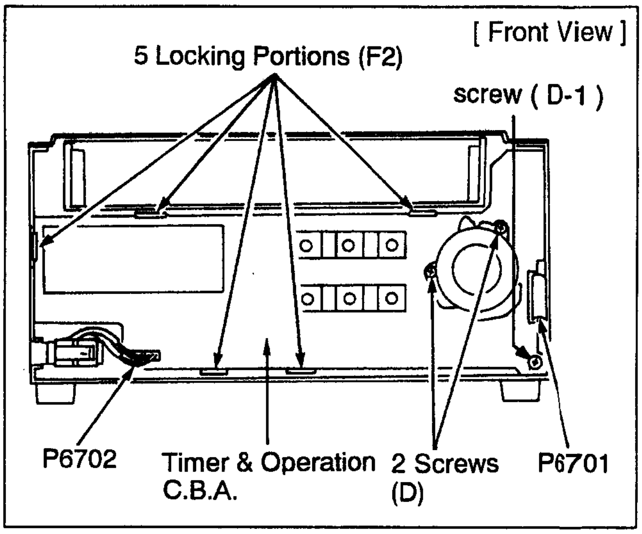

[Front View]
5 Locking Portions (F2)
screw (D-1)
P6702
Timer & Operation C.B.A.
2 Screws (D)
P6701

Figure D5

2-2-5. Removal of the Cassette Compartment Unit

1. Unscrew 2 screws(E) and slide the Cassette Holder Until appearing 2 screws (F) and then unscrew 2 screws (F) (Figure D6.).
2. Disconnect the Flexible Wire from connector P1508 mounted on the Front Loading C.B.A., then carefully pull out the Cassette Compartment Unit.

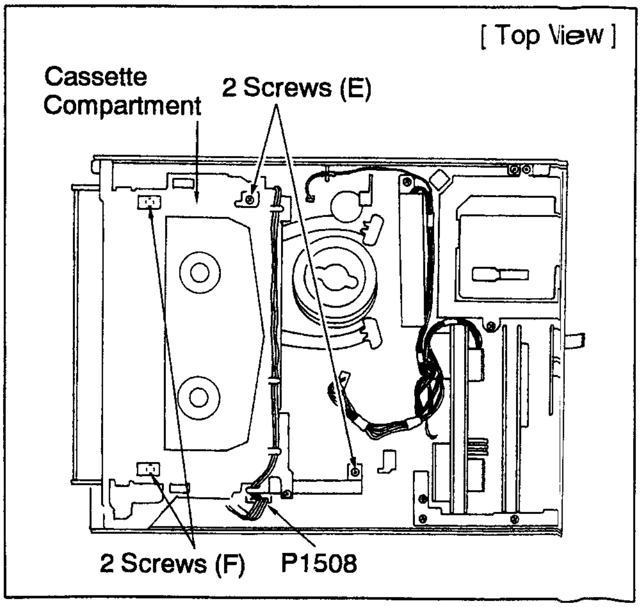

[Top View]
Cassette Compartment
2 Screws (E)
2 Screws (F)
P1508

Figure D6

2-2-6 Removal of the Rear Panel

1.Unscrew 4 screws (G) and a screw (H) on the Rear Panel.

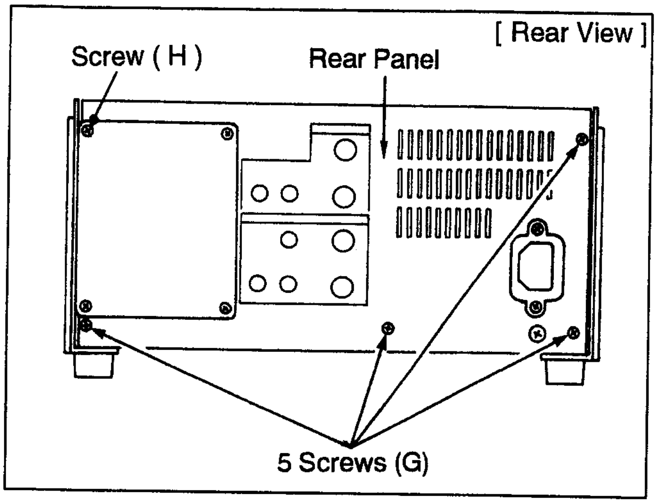

[Rear View]
Screw (H)
Rear Panel
5 Screws (G)

Figure D7

2-2-7 Removal of the Rear Jack C.B.A.

1. Unscrew the 5 screws (J) and unscrew the 2 screws (I) as shown in Figure D8.

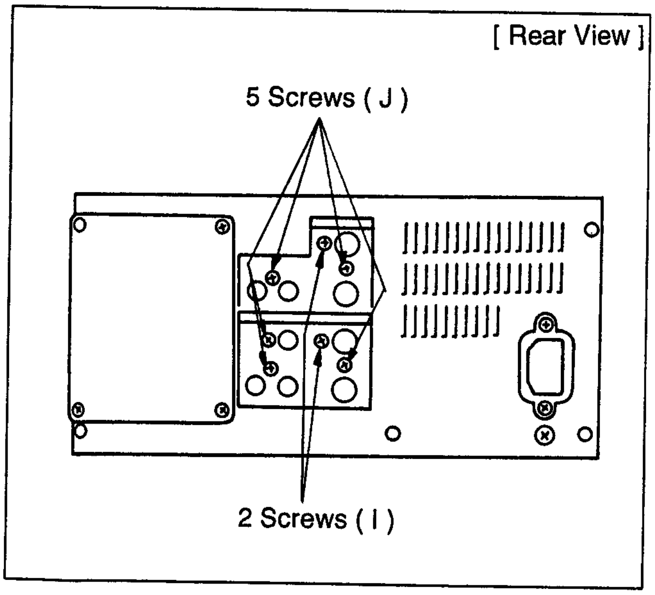

[Rear View]
5 Screws (J)
2 Screws (I)

Figure D8

2-2-8 Removal of the Power Unit

1. Disconnect the 2 Flexible Wires from the connector P1001 and P1102 on the Power Unit.
2. Unscrew 2 screws (K) on the Power Unit Shield Case (Figure D9.).
3. Carefully lift out the Power Unit.

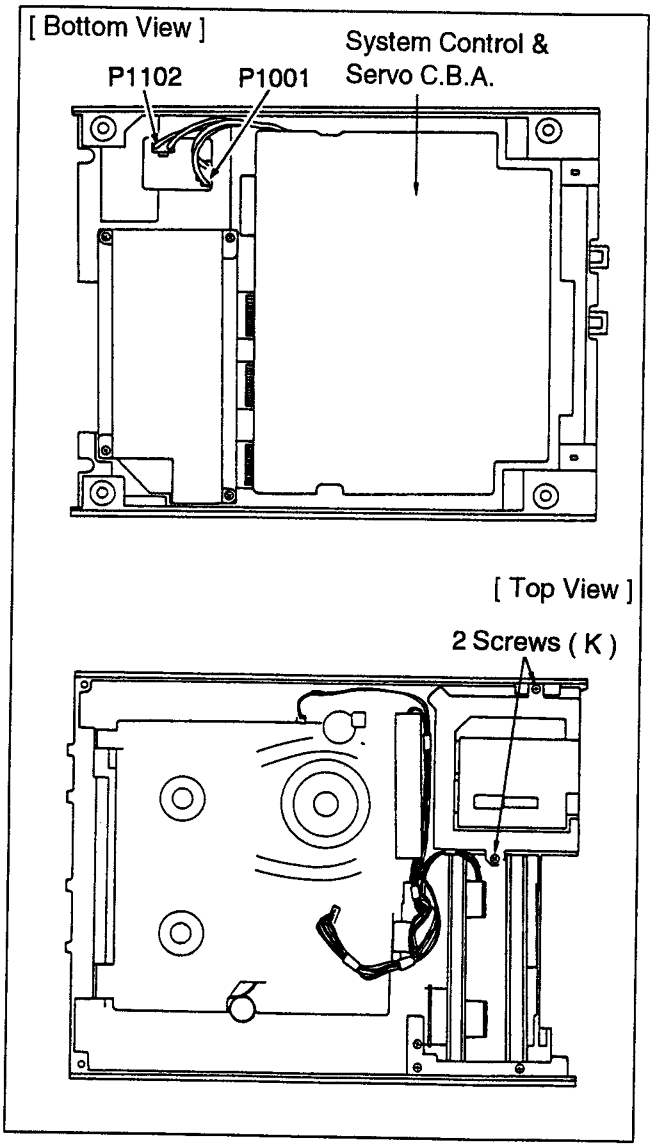

[Bottom View]
P1102
P1001
System Control &
Servo C.B.A.
[Top View]
2 Screws (K)

Figure D9

2-2-9 Removal of the Audio C.B.A.

1. Disconnect the 4 Flexible Wires from the connector P4001, P4002, P4003 and P4502 on the Audio C.B.A. (Figure D10.).
2. Carefully pull out the Audio C.B.A. (Figure D11.).

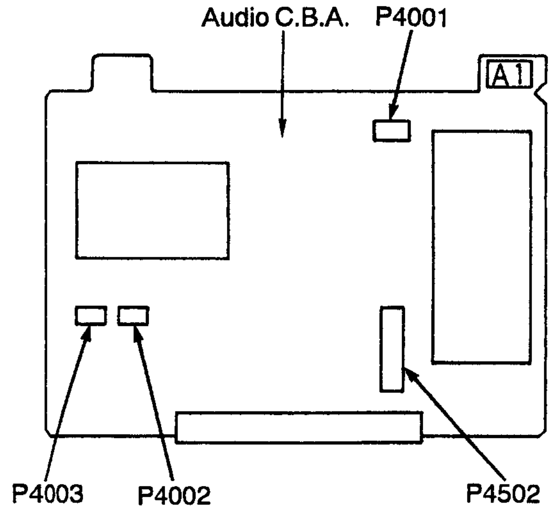

Audio C.B.A.
P4001
A1
P4003
P4002
P4502

Figure D10

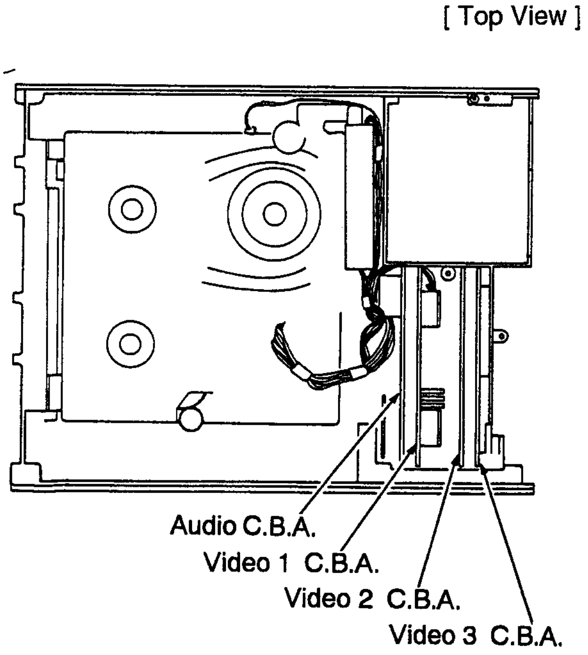

[Top View]
Audio C.B.A.
Video 1 C.B.A.
Video 2 C.B.A.
Video 3 C.B.A.

Figure D11

2-2-10 Removal of the Video 1 C.B.A.

1. Disconnect the Flexible Wires from the connector P3002 on the Video 1 C.B.A..
2. Carefully pull out the Video 2 C.B.A. (Figure D12.).

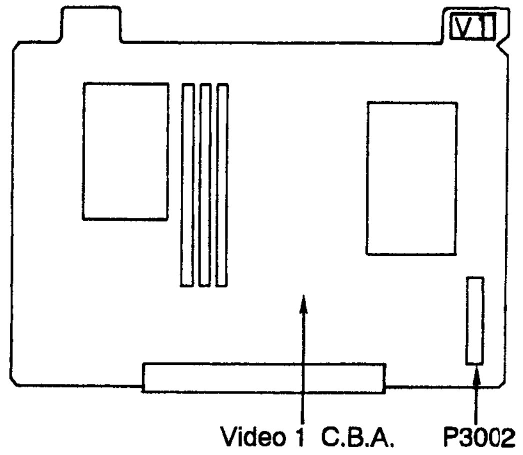

V1
Video 1 C.B.A.
P3002

Figure D12

2-2-11 Removal of the Video 2 C.B.A.

1. Carefully pull out the Video 2 C.B.A. (Figure D11.).

2-2-12 Removal of the Video 3 C.B.A.

1. Carefully pull out the Video 3 C.B.A. (Figure D11.).

2-2-13 Removal of the Mechanism Unit

1. Unscrew a screw (L) on the Head Amp Shield Case and carefully remove the Head Amp C.B.A..
2. Unscrew the 2 screws (M) on the Mechanism Unit and carefully remove the Mechanism Unit. (Figure D13-1 and D13-2.)

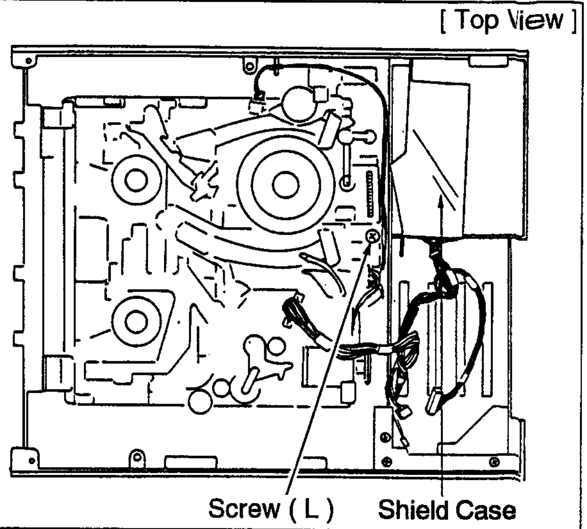

[Top View]
Screw (L)
Shield Case

Figure D13-1

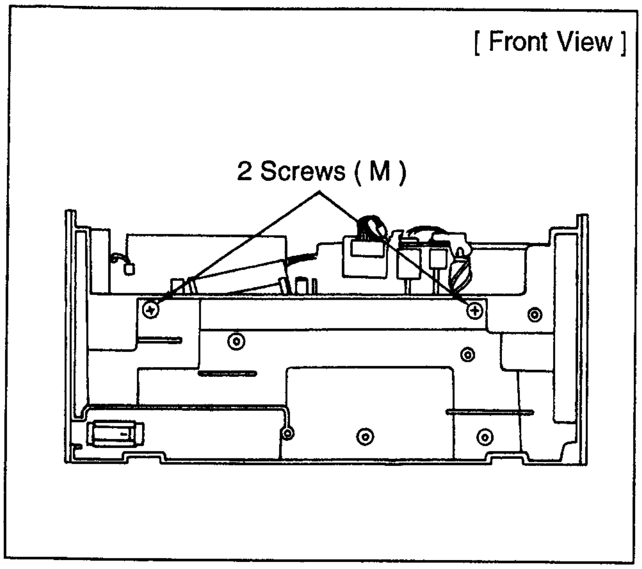

[Front View]
2 Screws (M)

Figure D13-2

2-2-14 Removal of the System Control & Servo C.B.A.

1. Unscrew the 4 screws (N) on the System Control & Servo C.B.A. and carefully open the System Control & Servo C.B.A. as shown in Figure D14.

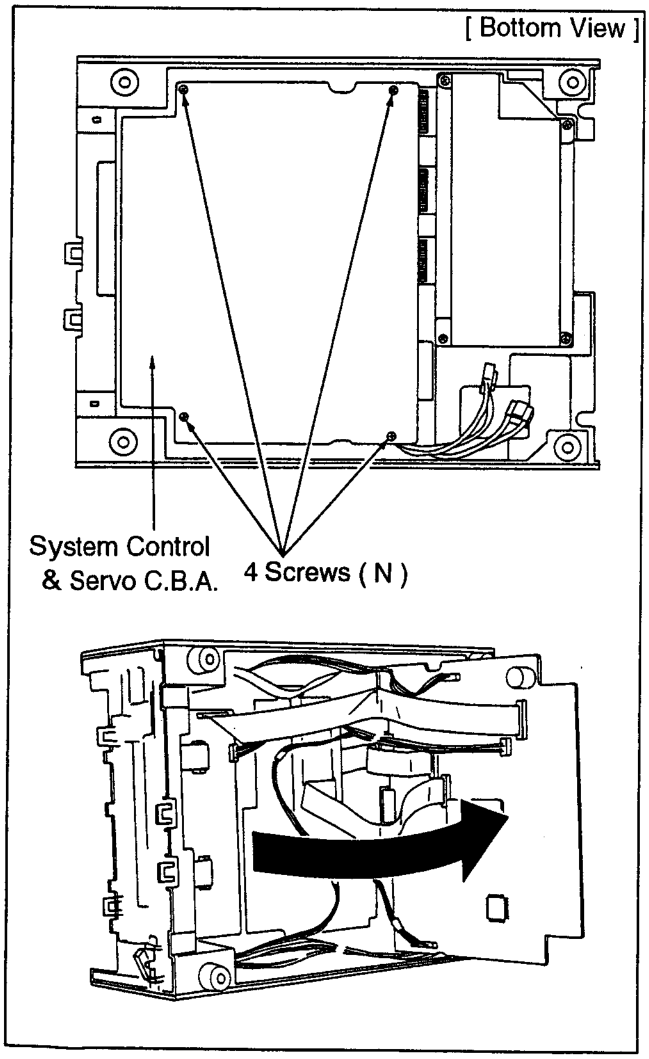

[Bottom View]
System Control
& Servo C.B.A.
4 Screws (N)

Figure D14

2-2-15 Removal of the Reel Drive C.B.A.

1. Disconnect the 4 Flexible Wires from the P2701, P2702,P2704 and P2705 on the Reel DriveC.B.A..
2. Unlock the 3 clamps (F3) on the Reel Drive C.B.A..
3. Remove the Reel Drive C.B.A..

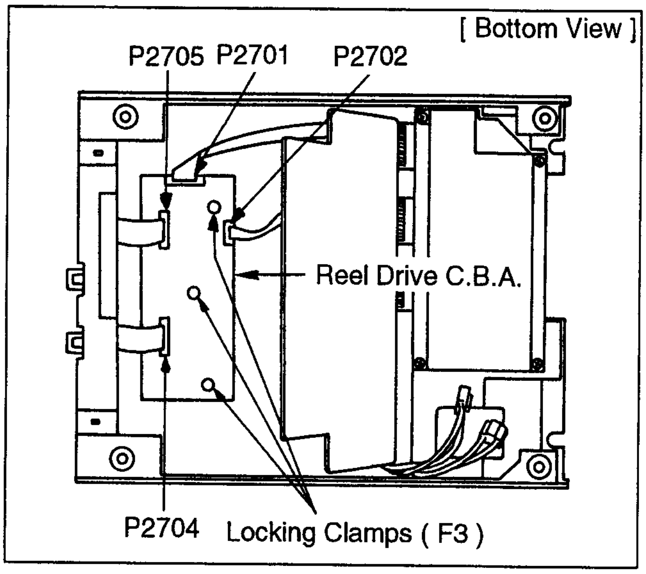

[Bottom View]
P2705
P2701
P2702
Reel Drive C.B.A.
P2704
Locking Clamps (F3)

Figure D15

2-2-16 Removal of the Mother C.B.A.

Note: Before removing the Mother C.B.A., be sure to remove the Power Unit, Rear Jack C.B.A., Video Video (1), (2) and (3) C.B.A., Audio C.B.A., and System control & servo C.B.A..

1. Unscrews the 4 screws (O) on the Mather C.B.A..
2. Carefully pull out the Mother C.B.A..

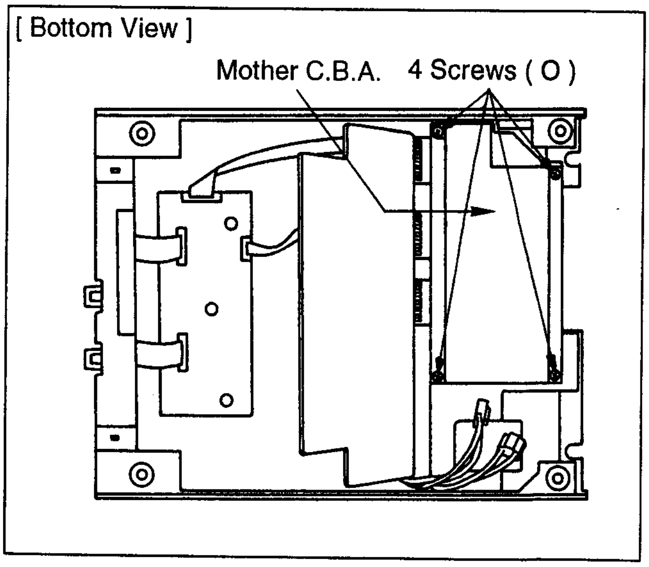
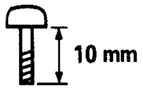
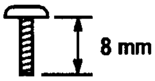
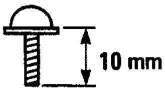
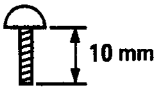
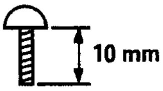
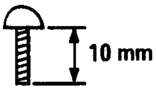
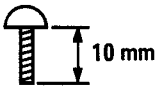
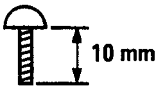
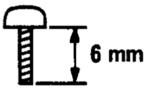
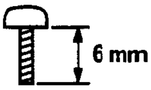
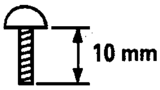
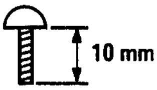
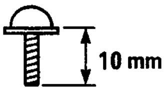
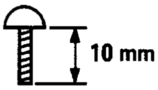
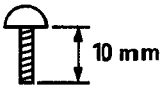
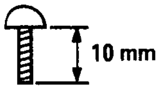

[Bottom View]
Mother C.B.A.
4 Screws (O)

Figure D16

2–3 SCREWS

A list of screws used in item 2-2.

(A)  VHD0222 (SILVER)	(B)  XTW3+10LR (BLACK)	(C)  XTV3+10JFR (GOLD)	(D)  XTV3+10JFR (RED)	(D-1)  XTV4+10JFR (RED)
(E)  XTV4+10JFR (RED)	(F)  XTV4+10JFR (RED)	(G)  XTV4+10JFR (RED)	(H)  XYN26+6FE (BLACK)	(I)  XYN26+6FE (BLACK)
(J)  XTV4+10JFR (RED)	(K)  XTV4+10JFR (RED)	(L)  XTV3+10JFR (GOLD)	(M)  XTV4+10JFR (RED)	(N)  XTV4+10JFR (RED)
(O)  XTV4+10JFR (RED)				

NOTE

SECTION 3

MECHANISM

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3-1. PARTS LOCATION

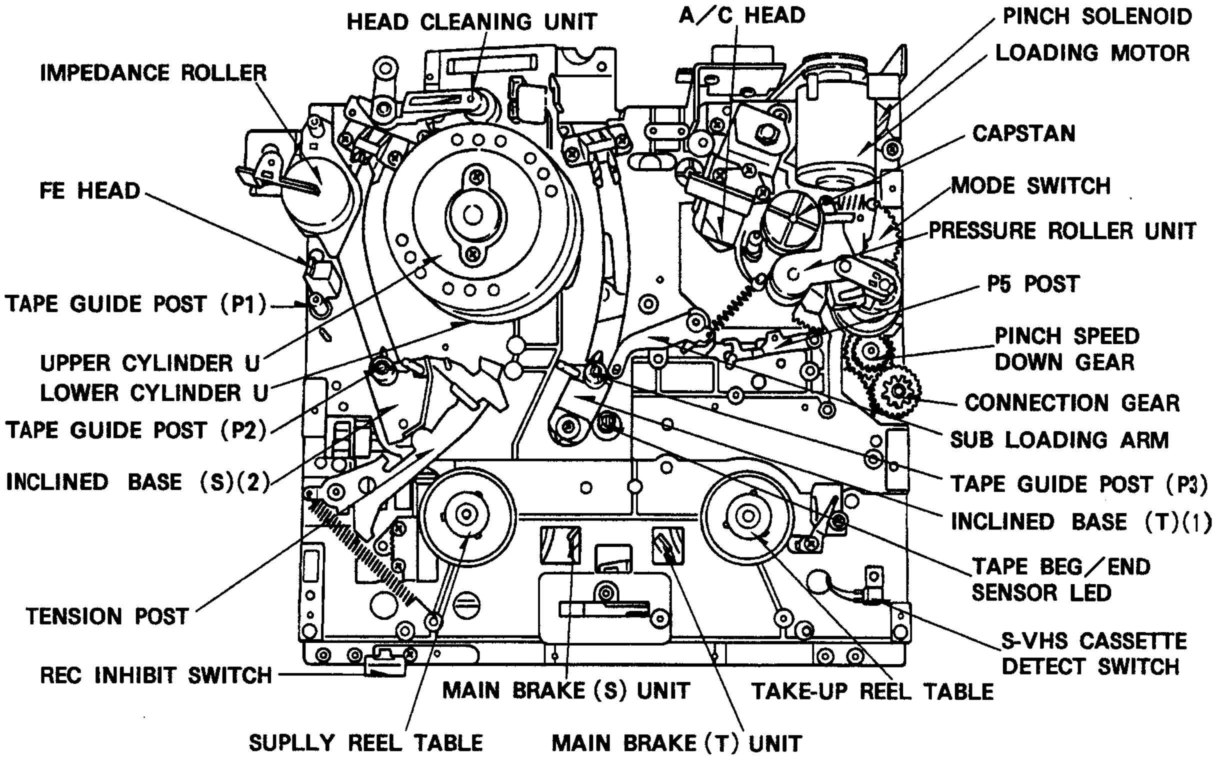

HEAD CLEANING UNIT
A/C HEAD
PINCH SOLENOID
LOADING MOTOR
IMPEDANCE ROLLER
CAPSTAN
FE HEAD
MODE SWITCH
PRESSURE ROLLER UNIT
TAPE GUIDE POST (P1)
P5 POST
PINCH SPEED DOWN GEAR
UPPER CYLINDER U
LOWER CYLINDER U
CONNECTION GEAR
TAPE GUIDE POST (P2)
SUB LOADING ARM
INCLINED BASE (S)(2)
TAPE GUIDE POST (P3)
INCLINED BASE (T)(1)
TAPE BEG/END SENSOR LED
TENSION POST
S-VHS CASSETTE DETECT SWITCH
REC INHIBIT SWITCH
MAIN BRAKE (S) UNIT
TAKE-UP REEL TABLE
SUPLLY REEL TABLE
MAIN BRAKE (T) UNIT

Figure M1 Top View

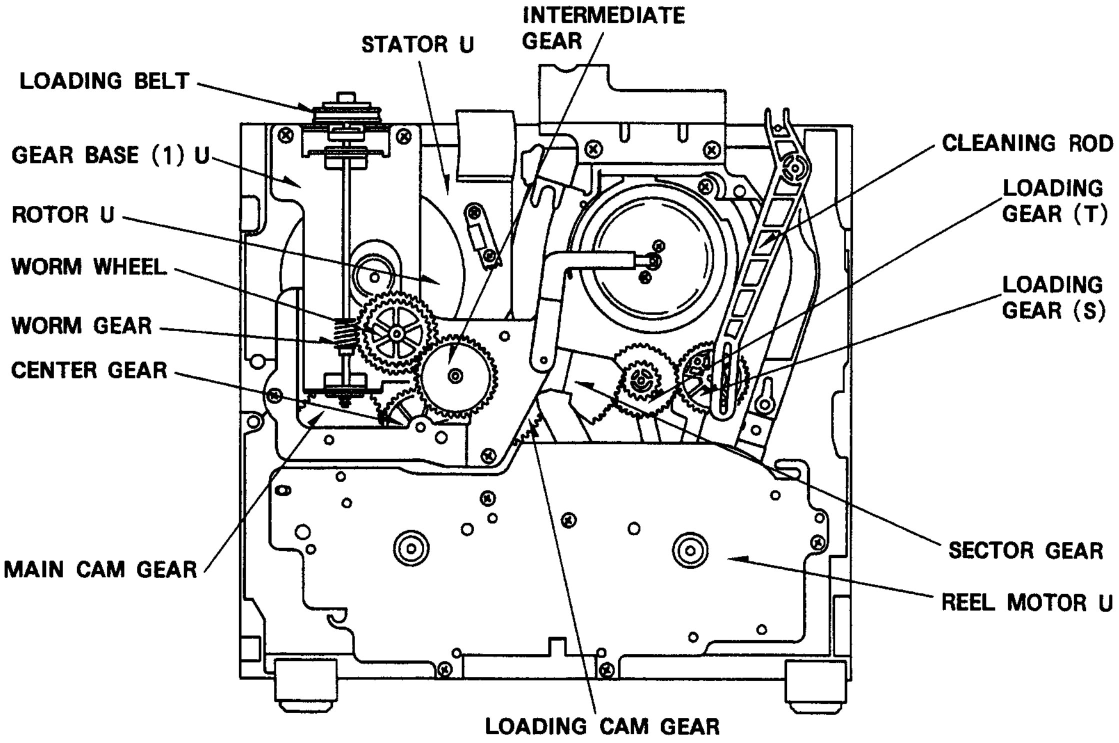
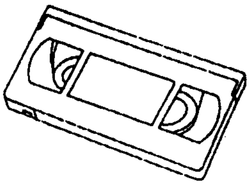
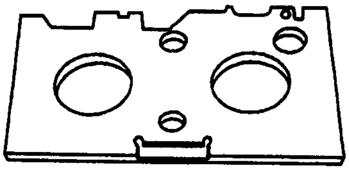
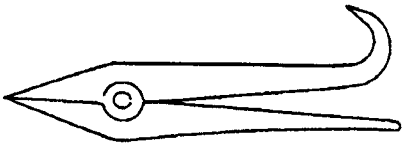
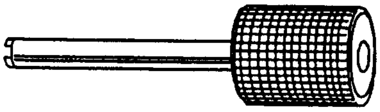
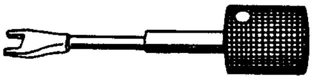
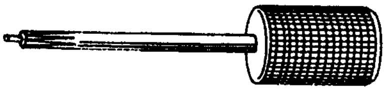
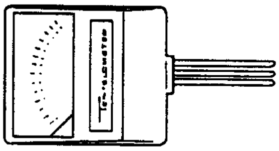
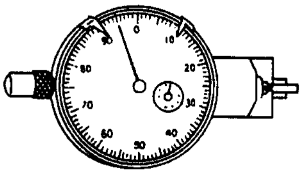
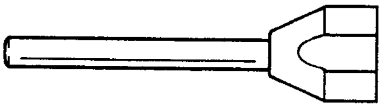
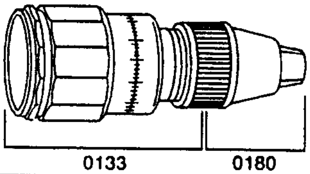
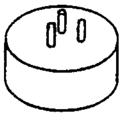
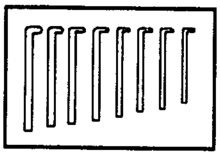
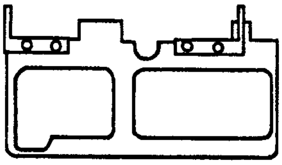
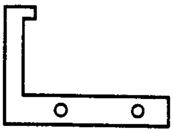
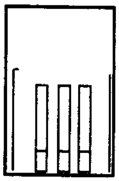
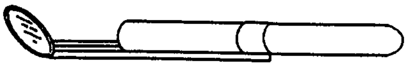
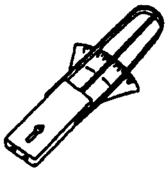
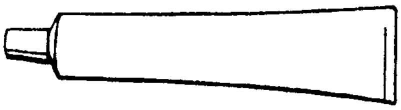
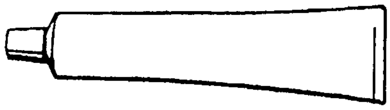

INTERMEDIATE GEAR
STATOR U
LOADING BELT
GEAR BASE (1) U
CLEANING ROD
LOADING GEAR (T)
ROTOR U
WORM WHEEL
LOADING GEAR (S)
WORM GEAR
CENTER GEAR
SECTOR GEAR
MAIN CAM GEAR
REEL MOTOR U
LOADING CAM GEAR

Figure M2 Bottom View

3-2. SERVICING FIXTURES AND TOOLS

The specified servicing fixture must be used to conduct adjustment.
The following fixtures, tools and measuring equipments are required to conduct complete Adjustments.

VFM8180HADH; VHS Alignment Tape 	VFK1012; Post Adjustment Plate 	**VFK0335 ; Retaining Ring Remover** 
VFK0329 ; Post Adj. Screwdriver 	**VFK0328 ; H-Position Adj. Screwdriver** 	**VFK0330 ; Fine Adj. Screwdriver (3mm)** 
VFK0132 ; Back Tension Meter (Tentelometer, Made in U.S.A) 	**VFK0190 ; Reel Table Height Fixture** 	VFK0951; Centering Fixture 
VFK0133 ; Dial Torque Gauge **VFK0180 ; Plastic Clamper Only** 	**VFK0134 ; Adaptor for VFK0133** 	**VFK0326 ; Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2, 2.4, 3 mm)** 
VFK0236 ; Tension Post Adj. Plate 	**VFK0806 ; Tension Sensor Adj. Fixture** 	**VFK27 ; Head Cleaning Stick** 
VFK0269 ; L Type Screwdriver 	**VFM0948 ; Check Light** 	**VFK66 ; Fan Type Tension Gauge** 
VFK0680 ; S.C.R. Grease (White) (for plastic part) 	**MOR265 ; Morlytone Grease (Black) (for metal part)** 	**VFK0131 ; High Quality Oil (for Capstan)** **Cleaning Liquid (Alchol) (Tape Transport Rubber Parts etc.)** << PURCHASE LOCALLY >>

3-3. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

1. Take out the Main AC.
2. Release the direction as shown in Figure M3.
3. Release the Wormshaft to clockwise unit cassette is ejected.

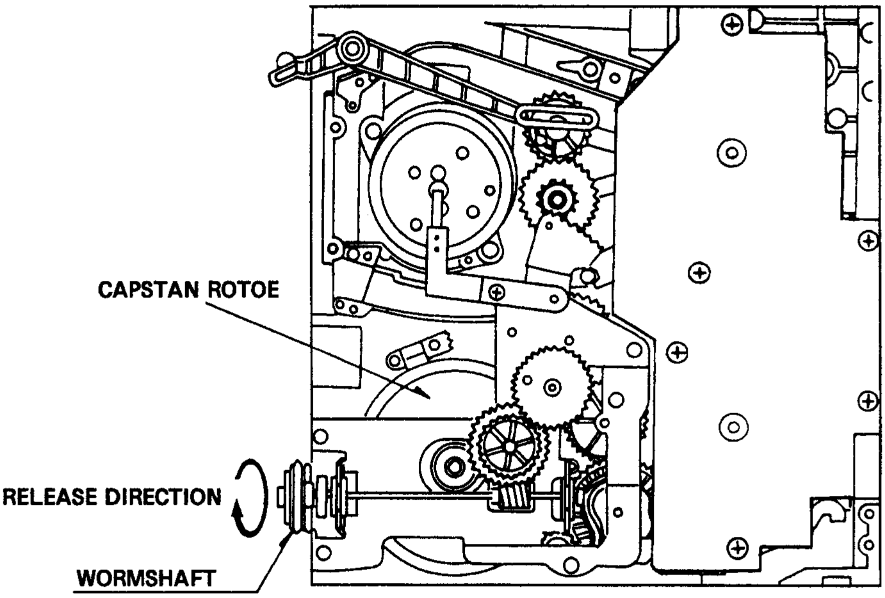

CAPSTAN ROTOE
RELEASE DIRECTION
WORMSHAFT

Figure M3 How to Eject Manually

3-4. MAINTENANCE PROCEDURES

3-4-1. REGULAR MAINTENANCE

The purpose of periodic maintenance is to preserve the functioning of this machine throughout its useful life. The user or service dealer should perform these maintenance regularly to ensure that maximum utility is obtained from the machine.

The VCR is a complicated place of equipment. It contains many belts, rollers, heads etc., which become worn, and deterlorate as time goes by, causing trouble. Dust and dirt will also impede the proper functioning of the machine. In light of this, it is very important that overall maintenance be done according to the maintenance chart to maintain the functions of the VCR, and to avoid accidental problems. This maintenance should also be performed after any repairs are done on the equipment.

The VCR used for business applications requires particular attention for several reasons. The installation conditions and applications are not always the best. Long use times, or poor environmental conditions may adversely affect the lifespan and performance of the machine. Regular maintenance assures that the purchaser obtains the maximum value for his expenditure. Accordingly, the necessity of regular maintenance should be fully explained at the time of sale, as well as during after-sale repairs.

3-4-2. MAINTENANCE CHART

The following periodic maintenance is required to prolong the life of the machine.

Ref. No. IN P/L	Parts Name	Hour									
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000
———	Tape Transporter	●	●	●	●	●	●	●	●	●	●
1-19	A/C Head U	●	●	●	●	●	●	●	◎	●	●
1-41	Upper Cylinder	●	◎	●	◎	●	◎	●	◎	●	◎
1-42	Cylinder U	●	●	●	●	●	●	●	◎	●	●
2-24	Supply Reel Table U								◎		
2-23	Takeup Reel Tuble U								◎		
2-8	Stator Base Unit								◎		
2-28	Capstan Roter U	●	●	●	●△	●	●	●	●△	●	●
1-25	Pressure Roller U	●	●	●	◎	●	●	●	◎	●	●
1-68	Head Cleaning U		◎		◎		◎		◎		◎
2-16	Main Brake (S)				◎				◎		
2-18	Main Brake (T)				◎				◎		
2-2	Loading Belt				◎				◎		
2-39	Loading Cam Gear								▲		
2-1	Worm Shaft								×		
2-3	Worm Wheel								×		
1-56	FE Head	●	●	●	●	●	●	●	◎	●	●
1-36	Mode Switch								◎		
2-33	Main Cam Gear								▲		
1-48	Indined (S) U								▲		
1-45	Indined (T) U								▲		
1-7	Loading Motor U								◎		
1-39	P5 Arm U								▲		

＊NOTE:

Symbol	Maintenance	Requirement	Remark
●	Cleaning	Ethyl-alcohol or Cleaning Liquid (Purchase locally)	Wipe dirt from the parts using soft cloth impregnated with Ethyl-Alcohol. Note: When cleaning rubber parts, avold using excessive alcohol since it may accelerate deterioration of these parts. After cleaning with alcohol, wipe the alcohol quickly and thoroughly.
◎	Replacement		
△	Lubrication	High Quality Spindle Oil (Purchase locally)	Supply one or two drops of oil.
▲	Greasing	Molytone Grease (MOR265)	Wipe the old grease and apply new grease.
×	Greasing	S.C.R. Grease (VFK0680)	Wipe the old grease and apply new grease.

3-4-3. LUBRICATION PROCEDURES OF THE CAPSTAN SHAFT

1. Remove the Pressure Roller Unit.
2. Remove the Thrust Screw.
3. Apply two drops of the oil (VFK0131) on the top of Capstan Shaft as shown in Figure M6-A.

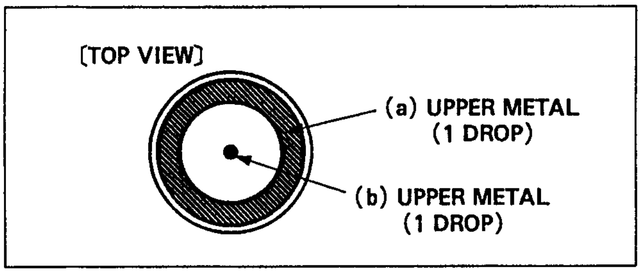

〔TOP VIEW〕
(a) UPPER METAL (1 DROP)
(b) UPPER METAL (1 DROP)

Figure M6-A

4. Turn the Thrust Adjustment Screw slowly to clockwise until the Capstan Rotor just starts turning (separate from the Capstan Stator).
5. Turn the Thrust Adjustment Screw another 180° clockwise as shown in Figure M6-B.
6. Install the Pressure Roller Unit.
7. Wipe the extra oil.

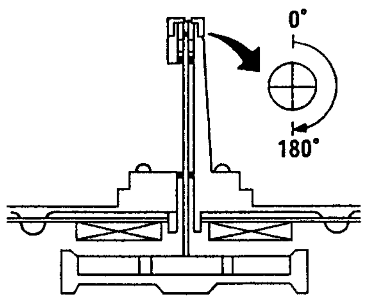


Figure M6-B

3-4-4. PROCEDURES FOR CLEANING OF THE CYLINDER UNIT

1. Position the Video Head to permit access for cleaning and hold the upper cylinder to keep it from turning while cleaning.
2. Gently rub the Video Head in direction of tape travel with Head Cleaning Stick moistened with Cleaning.
3. Repeat for the other video heads (Figure M7).

Note: 1. Do not rub vertically.
2. Do not apply any pressure to heads.

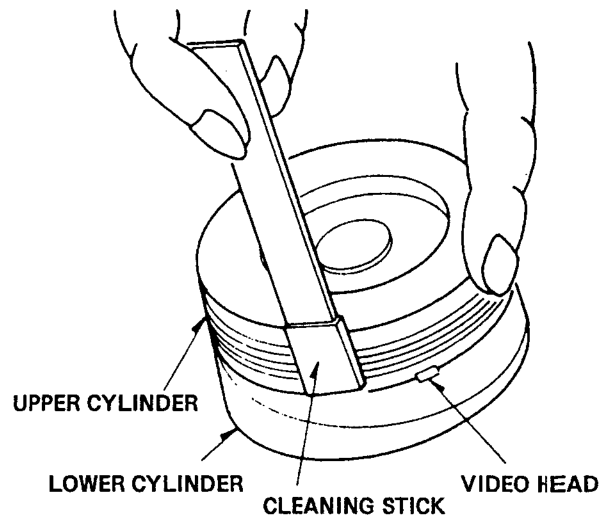

UPPER CYLINDER
LOWER CYLINDER
CLEANING STICK
VIDEO HEAD

Figure M7

3-4-5. ADJUSTMENTS AFTER RE-INSTALLING THE UPPER CYLINDER, LOWER CYLINDER

AFTER RE-INSTALLING THE UPPER CYLINDER OR LOWER CYLINDER

MECHANICAL ADJUSTMENT

- 3-6-3. FINE ADJUSTMENT OF THE GUIDE POST HEIGHT
- 3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
- 3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

ELECTRICAL ADJUSTMENT

- 4-3-1. PG SHIFTER ADJUSTMENT
- 4-3-11. S-VHS RECORDING CURRENT ADJUSTMENT
- 4-3-12. VHS RECORDING CURRENT ADJUSTMENT
- 4-3-28. Fi-Fi AUDIO HEAD SWITCHING SHIFTER ADJUSTMENT
- 4-3-31. Hi-Fi AUDIO REC CURRENT ADJUSTMENT

3-4-6. ADJUSTMENTS AFTER RE-INSTALLING THE A/C HEAD UNIT

AFTER RE-INSTALLING THE A/C HEAD UNIT

MECHANICAL ADJUSTMENT

- 3-6-3. FINE ADJUSTMENT OF THE GUIDE POST HEIGHT
  - A. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT
  - B. COARSE ADJUSTMENT OF THE A/C HEAD TILT
  - C. ADJUSTMENT OF THE A/C HEAD AZIMUTH
  - D. ADJUSTMENT OF THE A/C HEAD TILT & AZIMUTH
  - E. ADJUSTMENT OF LOOK SCREW
  - F. FINE ADJUSTMENT OF THE A/C
- 3-6-3. FINE ADJUSTMENT OF THE GUIDE POST HEIGHT
- 3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)
- 3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

ELECTRICAL ADJUSTMENT

- 4-3-24. NORMAL AUDIO FREQUENCY RESPONCE ADJUSTMENT
- 4-3-25. NORMAL AUDIO PLAYBACK GAIN ADJUSTMENT
- 4-3-26. NORMAL AUDIO BIAS CURRENT ADJUSTMENT
- 4-3-27. NORMAL AUDIO REC CURRENT ADJUSTMENT

3-5. MECHANICAL PARTS REPLACEMENT PROCEDURES

3-5-1. REPLACEMENT OF THE UPPER CYLINDER UNIT

1. First remove two screws as shown in Figure M10-A.
   Then unsolder of the soldered portions indicated by arrows on the Upper Cylinder, and finally remove the Upper Cylinder.

Note: Soldered portion can be easily removed by using solder sucking wire, etc.

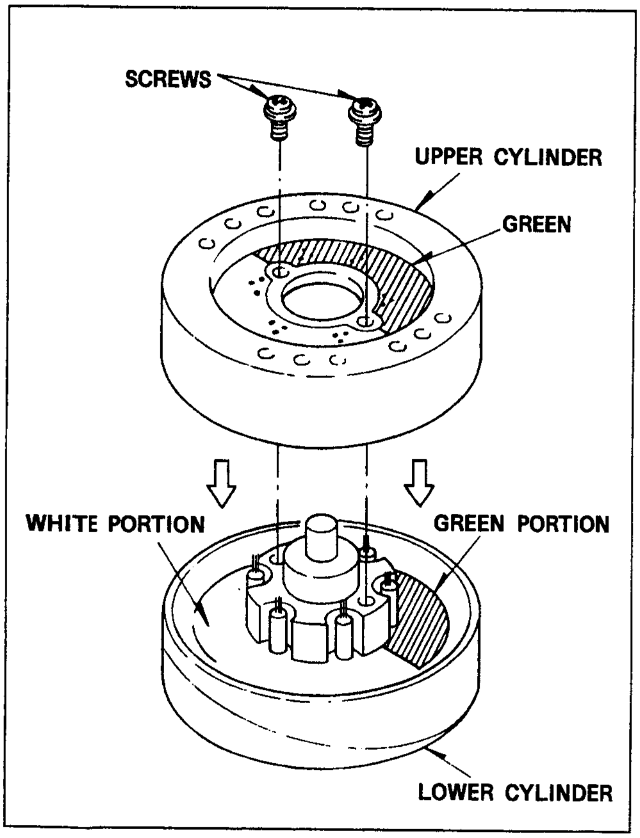

SCREWS
UPPER CYLINDER
GREEN
WHITE PORTION
GREEN PORTION
LOWER CYLINDER

Figure M10-A

2. The Upper Cylinder unit can be reinstalled by reversing the removal procedure.
   However, when Upper Cylinder is installed, be extremely carefully so that white portion of P.C.Board of Upper Cylinder correctly matches the white portion of bottom cylinder as shown in Figure M10-A.

Note: If the Upper Cylinder Unit is reversal installed, no color will appear when playing back pre-recorded tapes.

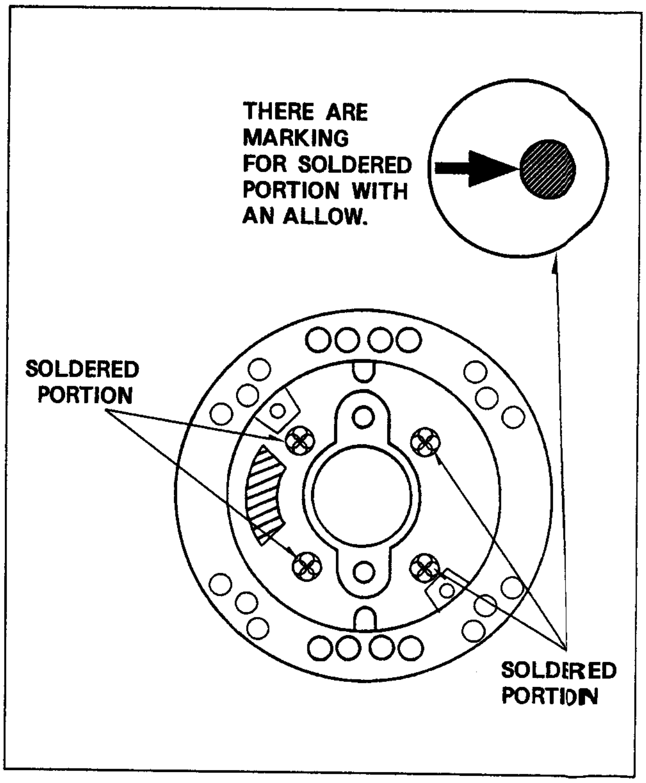

THERE ARE MARKING FOR SOLDERED PORTION WITH AN ALLOW.
SOLDERED PORTION
SOLDERED PORTION

Figure M10-B

3-5-2. REPLACEMENT OF THE LOWER CYLINDER UNIT

1. Unscrew the 2 screws and remove the Head Amp.
2. Remove the Cleaning rod from bottom side.
3. Unscrew 3 screws (A). Since there is very little clearance between DD Cylinder (Lower Cylinder) Unit and Chassis, remove the Cylinder gently and carefully (Figure M11).

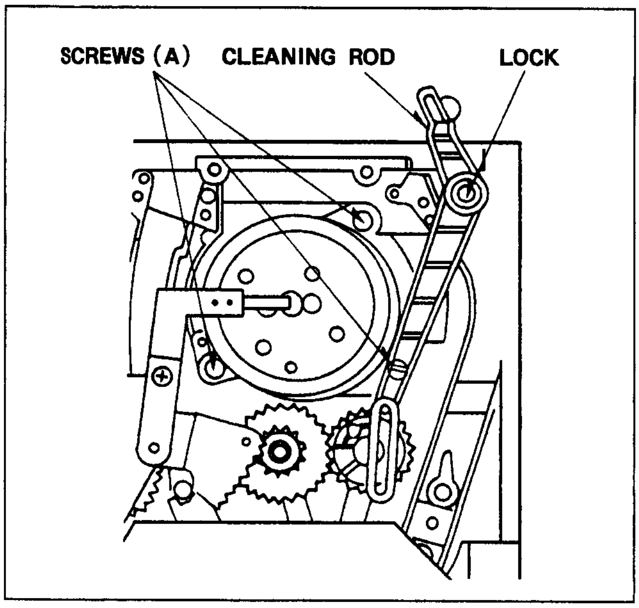

SCREWS (A)
CLEANING ROD
LOCK

Figure M11

4. Reinstall the new DD Cylinder (Lower Cylinder) Unit in the chassis, tighten the 3 screws (A). Then connect a connectors and reinstall the Cleaning Rod.
5. Re-install the Head Amp C.B.A.

Note: After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustment (Refer to 3-4-5. Maintenance Procedures).

3-5-3. REPLACEMENT OF THE A/C HEAD (1) UNIT

1. Disconnect a connector (Figure M12).
2. Unscrew 3 (B)(C)(D) screws with spring and then remove the A/C Head Unit (Figure M12).

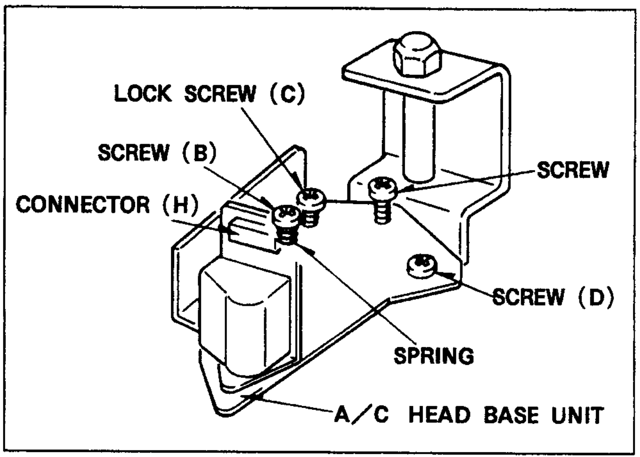

LOCK SCREW (C)
SCREW (B)
CONNECTOR (H)
SCREW
SCREW (D)
SPRING
A/C HEAD BASE UNIT

Figure M12

3. The A/C Head (1) Unit can be reinstalled by reversing the removal procedure.

Note: After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustment (Refer to 3-4-6. Maintenance Procedures).

3-5-4. REPLACEMENT OF THE FULL ERASE HEAD

1. Disconnect a connector.
2. Unscrew a screw (E) and remove the Full Erase Head (Figure M13).

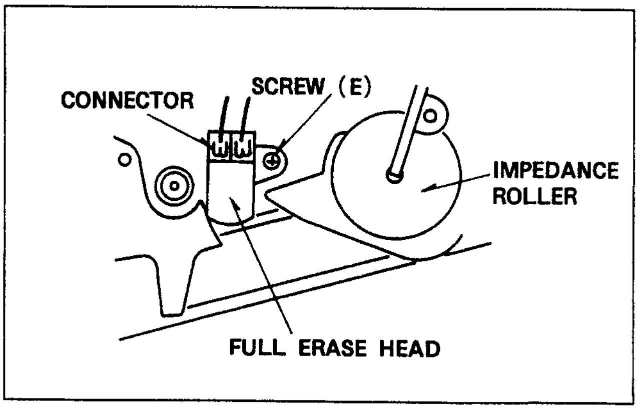

CONNECTOR
SCREW (E)
IMPEDANCE ROLLER
FULL ERASE HEAD

Figure M13

3. The new Full Erase Head can be reinstalled by reversing the removal procedure.

3-5-5. REPLACEMENT OF THE CAPSTAN ROTOR AND CAPSTAN STATOR

When replacing the Capstan stator unit the centre Fixing Tool must be used to fix the centre of Capstan Stator Unit.

1. Remove the loading belt.
2. Unscrew the 4 (F) screws and remove the Gear base Unit.
3. Carefully lift up the capstan rotor from the capstan housing, taking care so as not loose the 2 oil seals as shown in Figure M14-A.

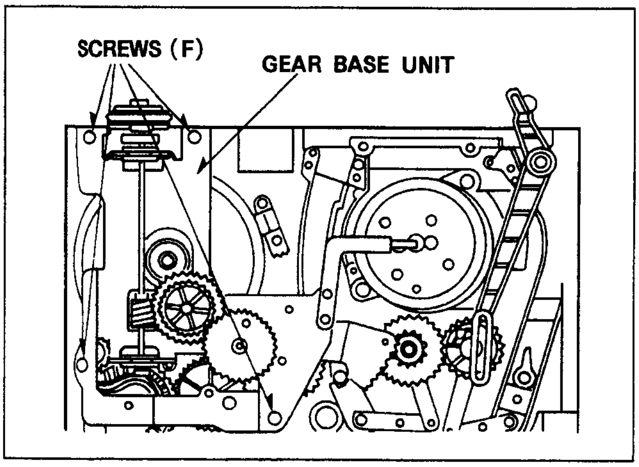

SCREWS (F)
GEAR BASE UNIT

Figure M14-A

4. Remove the 2 oil seals.
5. Unscrew the 3 (G) screws and remove the Capstan Stator.
6. Place the capstan stator unit into position.
7. Loosely tighten the 3 (G) screws.
8. Insert the Centre Fixing Tool as shown in Figure M14-B.

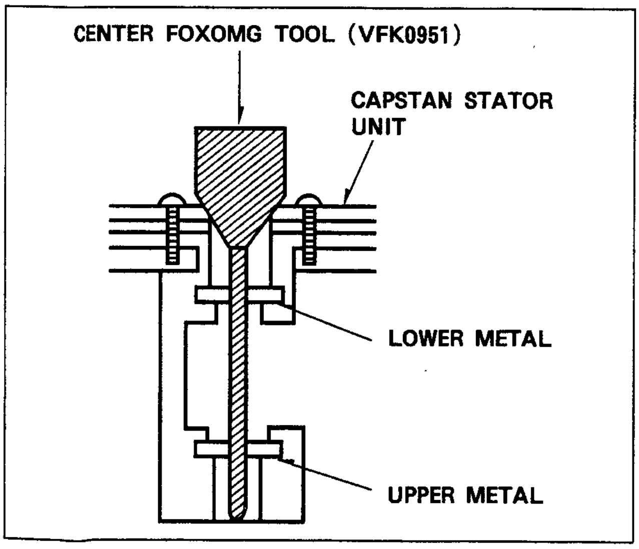

CENTER FOXOMG TOOL (VFK0951)
CAPSTAN STATOR UNIT
LOWER METAL
UPPER METAL

Figure M14-B

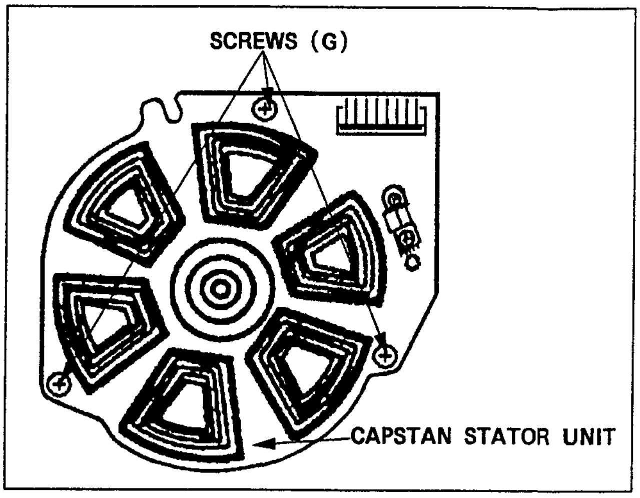

SCREWS (G)
CAPSTAN STATOR UNIT

Figure M14-C

9. Tighten the 3 (G) screws.
10. Remove the centre fixing tool.
11. The new capstan rotor unit can be reinstalled by reversing the removal procedure.

3-5-6. REPLACEMENT OF THE CAPSTAN HOUSING UNIT

1. Remove the pressure Roller Unit.
2. Remove the Sub post spring from hook of Capstan Housing.
3. Unscrew the 3 screws (H) and remove the Capstan Housing.
4. Remove the 2 oil seals and thrust screw.

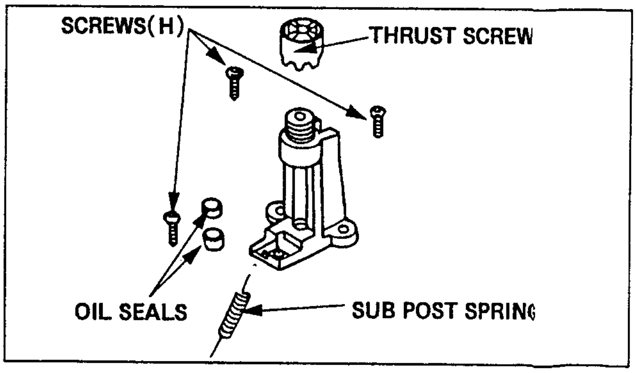

SCREWS(H)
THRUST SCREW
OIL SEALS
SUB POST SPRING

Figure M15

5. Replace the new Capstan Housing, 2 oil seals and thrust screw at same time.
6. Re-install the Capstan Housing Unit by reversing the remove procedure.

Note: After re-installing the thrust screw adjustment of the thrust screw are required.
Replace the new Capstan Rotor, 2oil seals and thrust screw at same time.

After re-installing the capstan rotor or capstan stator confirmation of FG out put level and adjustment of FG head gap are required.

3-5-7. REPLACEMENT OF THE INCLINED BASE (S),(T)

Supply Side

1. Unscrew a screw (I) and remove the head cleaning plate unit as shown in Figure M16-A.
2. Unscrew the 2 screws (J) and remove the post stopper.

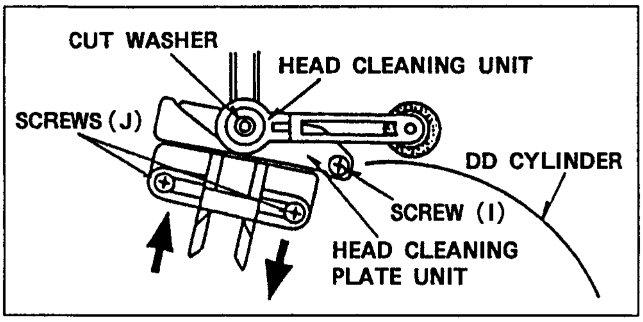

CUT WASHER
HEAD CLEANING UNIT
SCREWS (J)
DD CYLINDER
SCREW (I)
HEAD CLEANING PLATE UNIT

Figure M16-A

3. Remove the P2 post unit from loading arm (S) as shown in Figure M16-B.

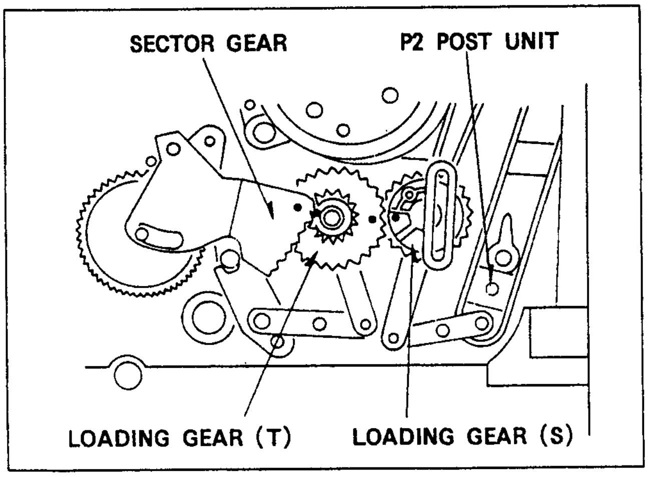

SECTOR GEAR
P2 POST UNIT
LOADING GEAR (T)
LOADING GEAR (S)

Figure M16-B

4. Pull out the Inclined base (S) from loading base.
5. The new inclined base unit can be reinstalled by reversing the removal procedure.

Note: Install post stopper pusing the arrow direction (A),(B) as shown in Figure M16-A.
After re-installing the inclined base (S) confirmation of tape interchangeability and P2, P3 posts adjustments are required.

Take-up Side

1. Unscrew a screw (K) and remove the inclined base (T) as show in Figure M14.

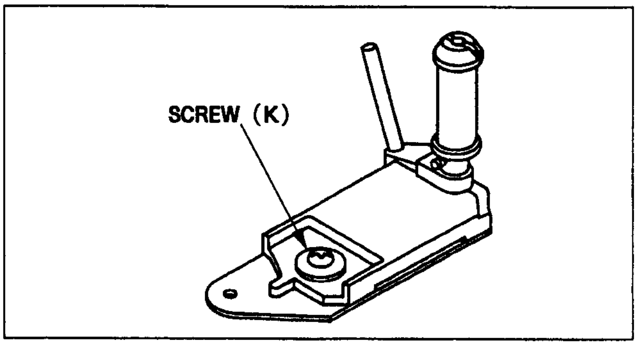


Figure M16-C

2. Install the inclined base (T) so that the tip of inclined base is center on the Plate Hole and then tighten screw (K).

Note: After re-installing the inclined base (T) confirmation of tape interchangeability and inclined base adjustment are required.

3-5-8. REPLACEMENT OF THE P5 POST

1. Remove the top cover and cassette holder.
2. Rotate the loading motor to clockwise, until the stop mode.
3. Remove the pressure roller unit.
4. Remove the pinch cam (Ref. to Replacement of the mode switch) and P5 pull out sector gear as shown in Figure M17.

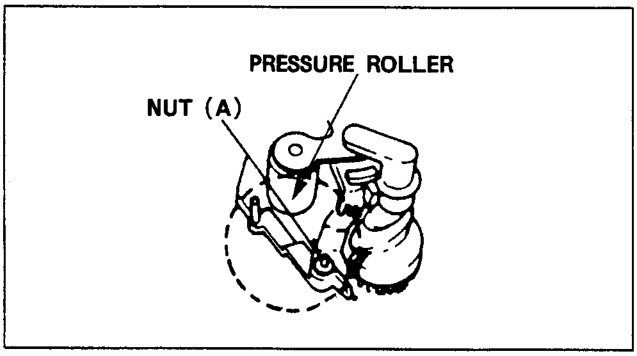

PRESSURE ROLLER
NUT (A)

Figure M17

5. Unscrew a Nut (A) and Remove the P5 Post.
6. The new P5 post can be reinstalled by reversing the removal procedure.

Note: After-reinstalling the P5 post confirmation of tape waving and P5 post height adjustment are required.

3-5-9. REPLACEMENT OF THE REEL UNIT

1. Remove 6 screws (L) and carefully lift the DD Reel Unit.
2. Disconnect a connector.

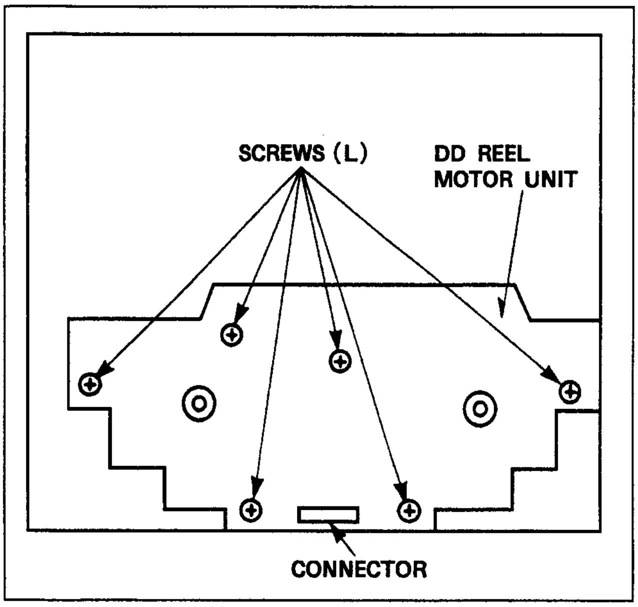

SCREWS (L)
DD REEL MOTOR UNIT
CONNECTOR

Figure M18-A

3. The Reel Motor Unit can be re-installed by reversing the removal procedure.

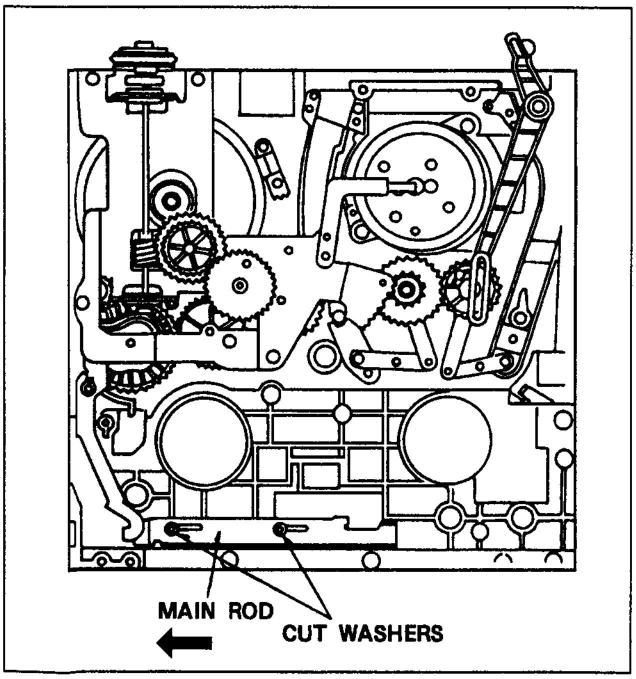

MAIN ROD
CUT WASHERS

Figure M18-B

Note: When assembling the DD Reel Motor Unit, side the Main Rod to far left side by rotating a center Gear.

3-5-10. REPLACEMENT OF THE MAIN BRAKE (S),(T) UNIT

1. Remove the Reel Unit (Refer to Replacement of the Reel Unit).
2. Remove a Retaining Ring (A).
3. Remove the Main Brake (S),(T) with a spring.

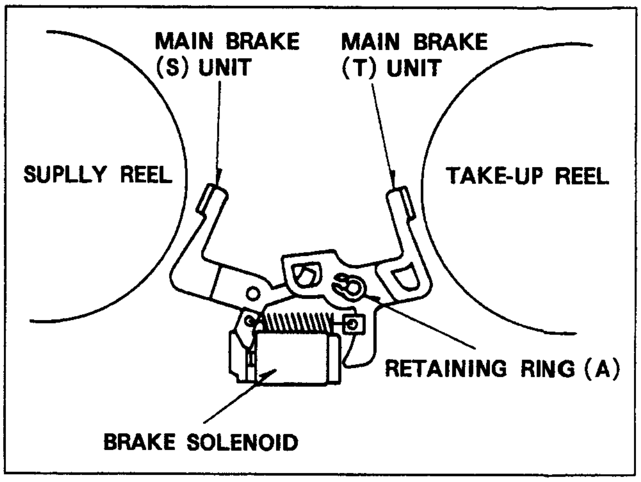

MAIN BRAKE (S) UNIT
MAIN BRAKE (T) UNIT
SUPLLY REEL
TAKE-UP REEL
RETAINING RING (A)
BRAKE SOLENOID

Figure M19

4. The new Main Brake (S),(T) Unit can be reinstalled by reversing the removal procedure.

Note: When assembling the DD Reel Motor Unit, slide the Main Rod to far left side by rotating a Center Gear (Figure M19).

3-5-11. REPLACEMENT OF THE PRESSURE ROLLER UNIT

1. Place the deck in or EJECT mode.
2. Remove the Pinch Can Cap.
3. Remove the Pressure Roller Unit.

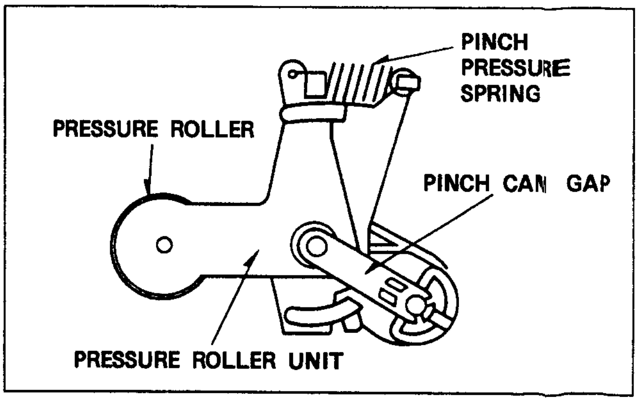

PINCH PRESSURE SPRING
PRESSURE ROLLER
PINCH CAN GAP
PRESSURE ROLLER UNIT

Figure M20

4. The new Pressure Roller Unit can be reinstalled by reversing the removal procedure.

3-5-12. REPLACEMENT OF THE MODE SWITCH

1. Place the deck in the STOP mode.
2. Remove the Cassette Compartment Unit. (Refer to Disassembly Procedures).
3. Remove the Pinch Cam Cap and Pressure Roller Unit.
4. Unscrew the 2 screws and remove the Head Amp.
5. Remove the Pinch Cam.
6. Unscrew 2 screws (M) and remove the Loading Motor Base.
7. Unscrew a screw (N) and unsolder 5 of soldered portions.
8. Finally remove the Mode Switch.

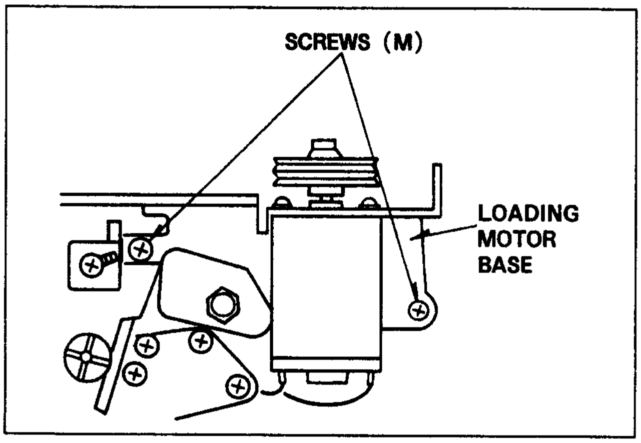

SCREWS (M)
LOADING MOTOR BASE

Figure M21-A

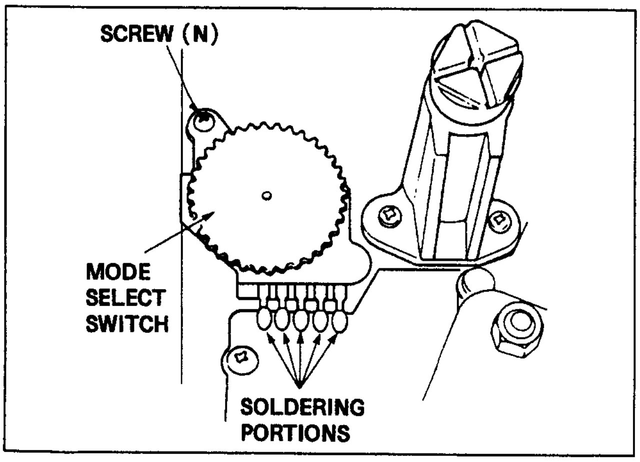

SCREW (N)
MODE SELECT SWITCH
SOLDERING PORTIONS

Figure M21-B

9. Install a Mode Switch and tighten screw (N), then solder 5 soldering portions.
10. Install the Pinch Cam and Pressure Roller Unit. (Refer to "Assembly Procedures of Pinch Cam & Pressure Roller Unit.")
11. Install the Loading Motor Base and tighten screw (M).
12. Install the Head Amp and tighten 2 screws.
13. Install the Cassette Compartment. (Refer to Reinstallation of Cassette Compartment.)

3-5-13. REPLACEMENT OF THE PINCH SOLENOID

1. Unscrew 2 screws (M) and remove the Loading Motor Base (Figure M21-A).
2. Unscrew 2 screws (O), Remove the Motor Pulley and Loading Motor (Figure M22-A).
3. Disconnect a connector (red) on the Motor Base C.B.A.
4. Unscrew 2 screws (P)(Figure M22-B) and remove the Pinch Solenoid.
5. Install the Pinch Solenoid on to the Motor Base so that the hole of the Motor Base should be the large hole of the Solenoid Base (Figure M22-C).
6. Tighten 2 screws (P).
7. Install a Loading Motor and tighten 2 screws (O).
8. Install the Loading Motor Base and tighten 2 screws (M)(Figure M21-A).

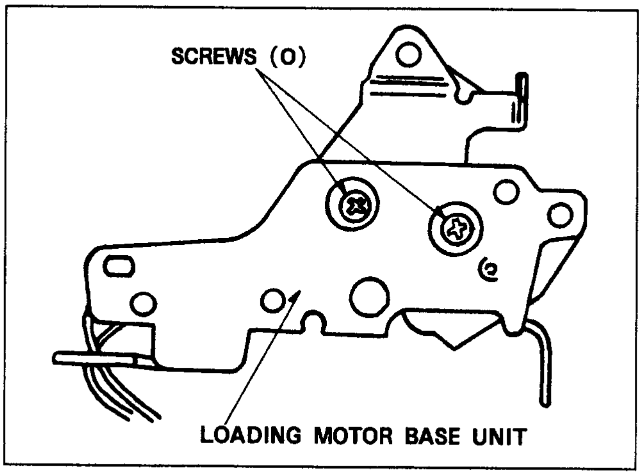

SCREWS (O)
LOADING MOTOR BASE UNIT

Figure M22-A

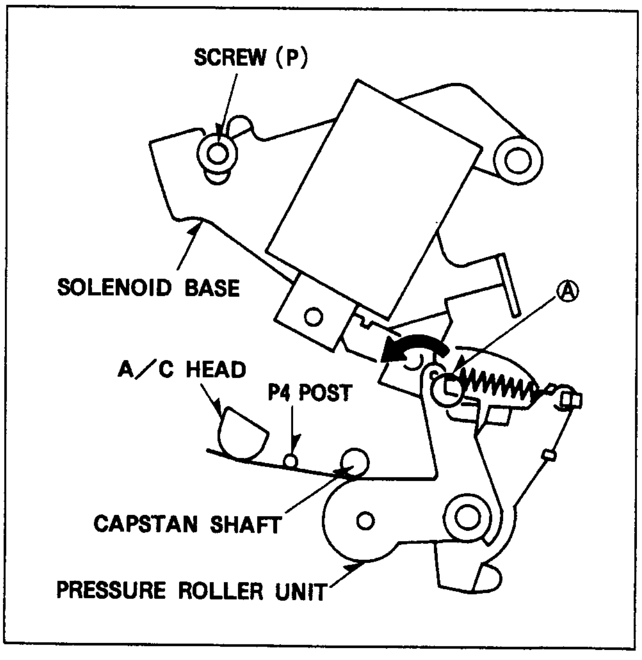

SCREW (P)
SOLENOID BASE
Ⓐ
A/C HEAD
P4 POST
CAPSTAN SHAFT
PRESSURE ROLLER UNIT

Figure M22-B

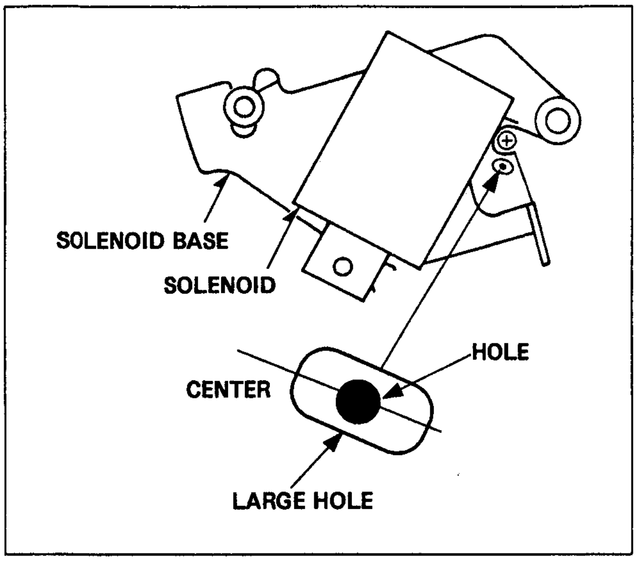

SOLENOID BASE
SOLENOID
HOLE
CENTER
LARGE HOLE

Figure M22-C

Note: Pressure Adjustment of the Pinch Roller (Refer to Mechanical Adjustment procedures) should be performed after completion of reinstalling the Pinch Solenoid.

3-5-14. REPLACEMENT OF THE HEAD CLEANING PAD

1. Remove a Cut Washer (N) and the Head Cleaning Pad Unit.
2. The Head Cleaning Pad Unit can be reinstalled by reversing the removal procedure.

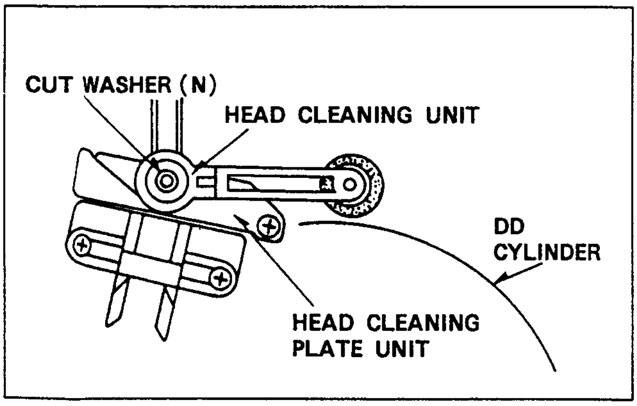
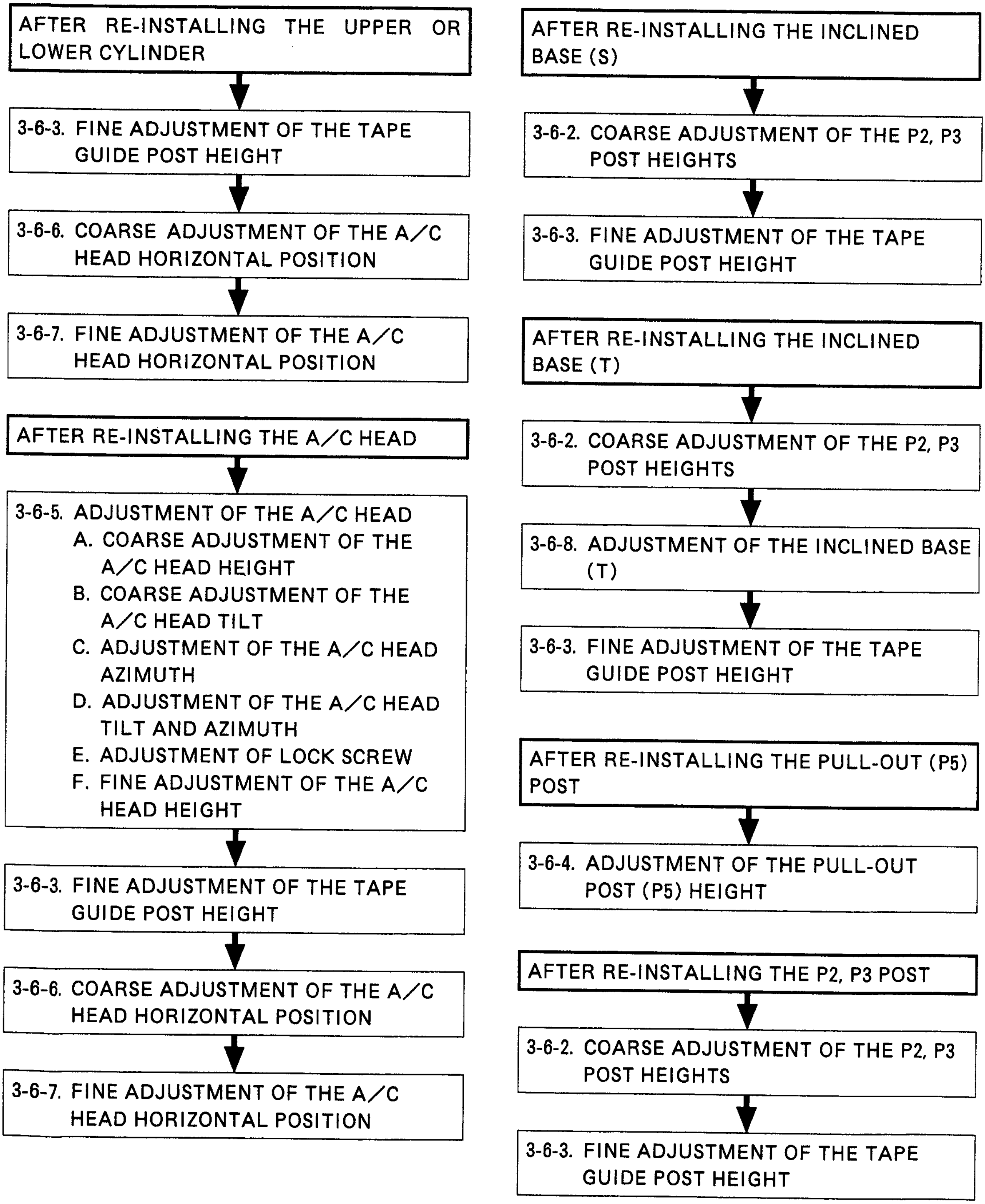

CUT WASHER (N)
HEAD CLEANING UNIT
DD CYLINDER
HEAD CLEANING PLATE UNIT

Figure M23

3-6. MECHANICAL ADJUSTMENT PROCEDURES

3-6-1. FLOW CHART OF TAPE INTERCHANGEABILITY ADJUSTMENT



AFTER RE-INSTALLING THE UPPER OR LOWER CYLINDER

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

↓

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

↓

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

AFTER RE-INSTALLING THE A/C HEAD

↓

3-6-5. ADJUSTMENT OF THE A/C HEAD
- A. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT
- B. COARSE ADJUSTMENT OF THE A/C HEAD TILT
- C. ADJUSTMENT OF THE A/C HEAD AZIMUTH
- D. ADJUSTMENT OF THE A/C HEAD TILT AND AZIMUTH
- E. ADJUSTMENT OF LOCK SCREW
- F. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

↓

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

↓

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

AFTER RE-INSTALLING THE INCLINED BASE (S)

↓

3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

AFTER RE-INSTALLING THE INCLINED BASE (T)

↓

3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS

↓

3-6-8. ADJUSTMENT OF THE INCLINED BASE (T)

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

AFTER RE-INSTALLING THE PULL-OUT (P5) POST

↓

3-6-4. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT

AFTER RE-INSTALLING THE P2, P3 POST

↓

3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

3-6-2. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 and P3)

Note: The Tape Guide Posts have been precisely adjusted at the factory. Therefore, normally do not change the height of the P2 and P3 Posts.
To prevent the alignment tape from being damaged, use a normal cassette tape for this procedure.

<<TOOL>>

Post Adjustment Plate	;	VFK0191
Reel Table Height Gauge	;	VFK0190
Post Adjustment Screwdriver	;	VFK0329
Check Light	;	VFK0948
L Type Screwdriver	;	VFK0269

1. Remove the cassette compartment (Refer to Disassembly Procedures).
2. Place the Post Adjustment Plate over the reel tables. Confirm that the Post Adjustment Plate is firmly seated as shown in Figure M25-A.

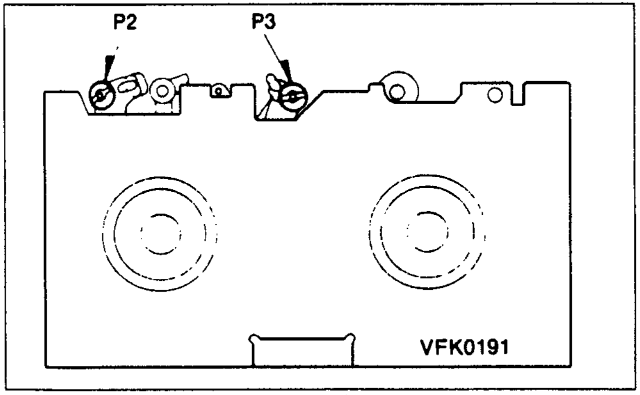


Figure M25-A

3. Lower 2 tape guide posts (P2 and P3) by turning the Post Adjustment screwdriver so that the condition of post becomes as shown in Figure M25-B. That is the lower edge of Tape guide should be lower than surface of Adjustment Plate.

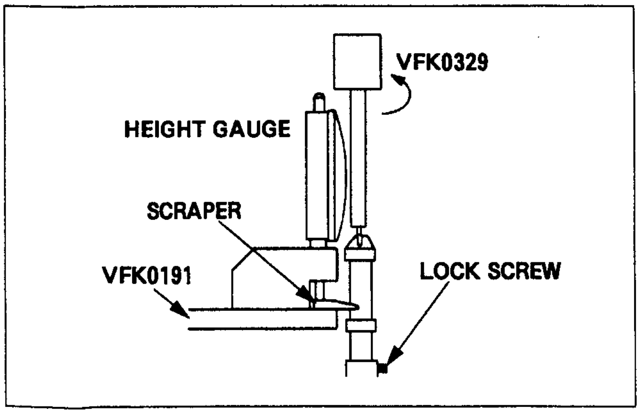


Figure M25-B

Note: Before turning P2 and P3 slightly loosen the Lock Screw using the L Type Screwdriver.

4. Place the scraper of Reel Table height Gauge as shown in Figure M25-C.
Set the gauge to zero, then raise the post slowly until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper.

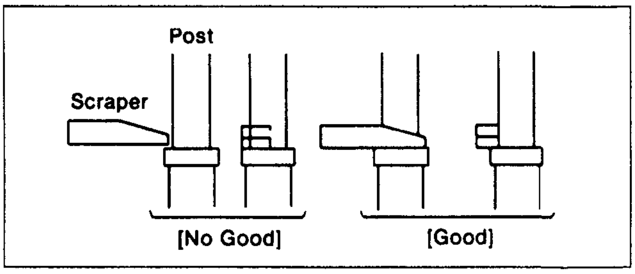


Figure M25-C

5. After the adjustment, install the cassette compartment referring to Reinstallation of cassette compartment.
6. Play back the beginning portion of NV-T160 cassette tape, and confirm that tape travel as shown in Figure M25-D.

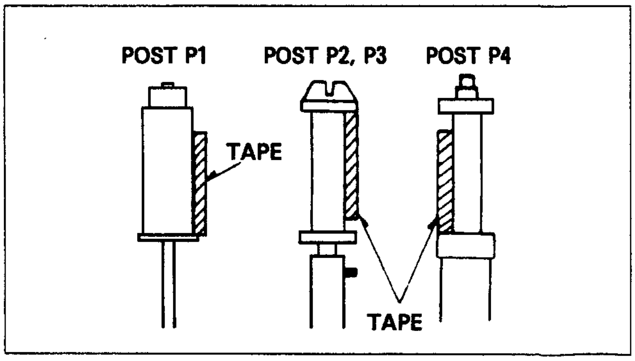


Figure M25-D

7. Make sure that the edges of the tape are not curling or waving at the bottom or top end of the posts P2, P3 by using the Check Light.
8. If there are waving or filling at the lower or upper edge of the P2 and P3 posts, readjust the heights of P2 and P3 Posts correctly as shown in Figure M25-E.

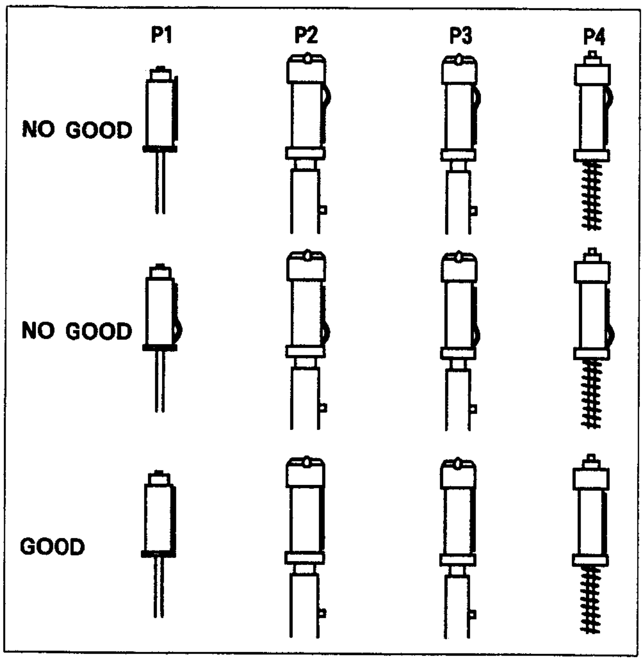


Figure M25-E

9. And confirm that the tape runs along the Cylinder Lead Correctly.

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 and P3)(LINEARITY)

<<TOOL>>

Alignment Tape	;	VFM8180HADH
Post Adjustment Screwdriver	;	VFK0329

Note: Before playing back the alignment tape playback a normal cassette tape and confirm correct transport.

1. Connect the oscilloscope to the TP6 of the Video 1 C.B.A. (Video RF Envelope and the head switching pulse as a triggering signal.
2. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8180HADH).

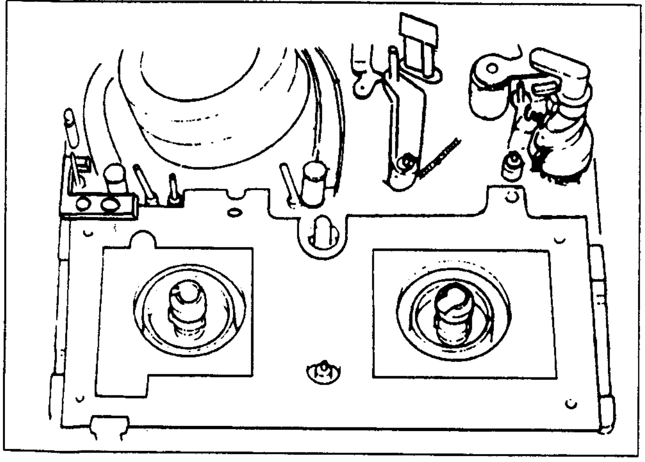


Figure M26-A

3. Press the tracking control button on the front panel and adjust for maximum.
4. If the RF envelope appears like example A or B in Figure M26B then adjustment of the tape guide post (P2:Entrance) is necessary.
5. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope wavefrom at the entrance portion becomes flat as shown in Figure M26B.

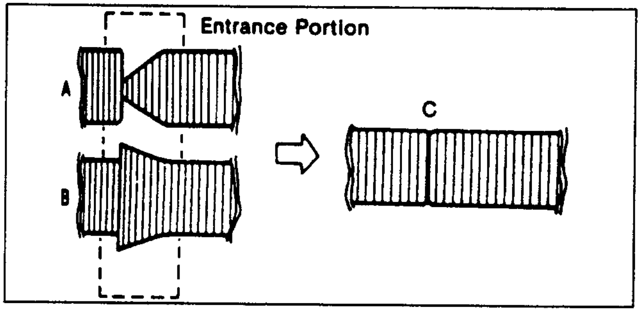


Figure M26-B

6. If the RF envelope appears like example D or E in Figure M26-C , then adjustment of the tape guide post (P3:Exit) is necessary.
7. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Figure M26-C.

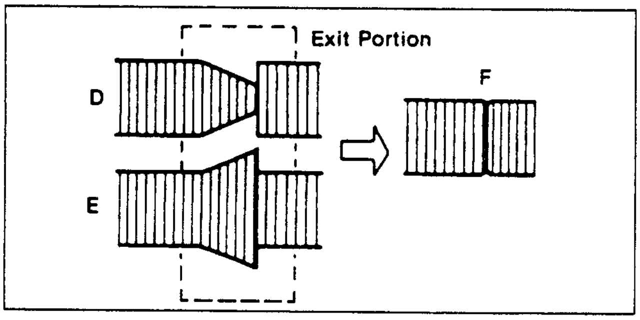


Figure M26-C

8. The output envelope should vary nearly parallel with other condition as shown in Figure M26-D.

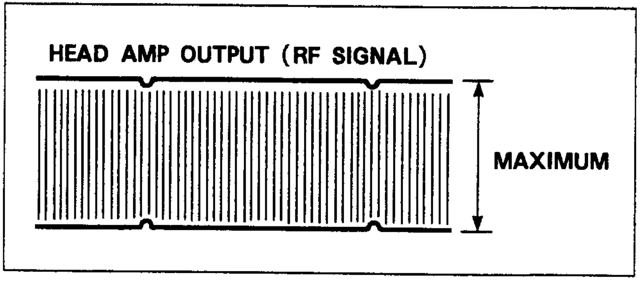


Figure M26-D

9. If the RF envelope does not meet these specification,

   V1/V0 ≥ 0.7
   V2/V0 ≥ 0.8
   V3/V0 ≥ 0.7
   then repeat steps 4-9 again.

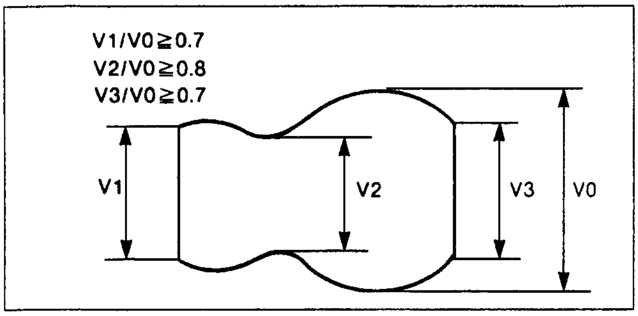

V1/V0≧0.7
V2/V0≧0.8
V3/V0≧0.7
V1
V2
V3
V0

Figure M26-E

3-6-4. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT

<<TOOL>>

Post Adjustment	;	VFK0191
Reel Table Height Gauge	;	VFK0190
Nut Driver	;	Purchase locally

<<SPEC>>
0.03mm ± 0.01mm

Note: Unless the replacement or adjustment this post is required, the adjustment nut should not be turned.

1. Remove the cassette compartment (Refer to Disassembly procedures).
2. Place the Post Adjustment Plate over the reel tables.
3. Turn the Worm Shaft counterclockwise (loading direction) until the mechanical condition becomes as shown in Figure M27-A.

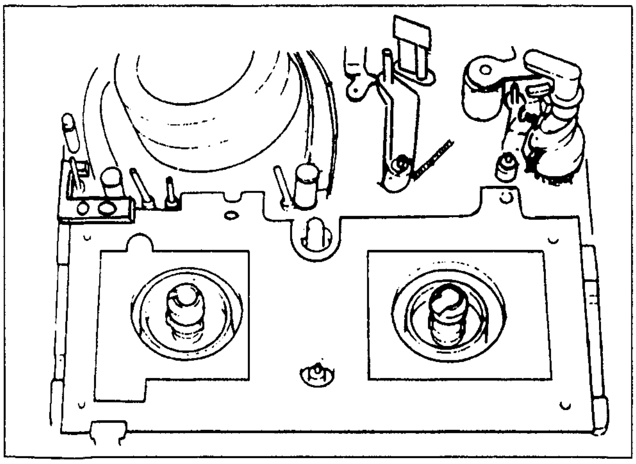


Figure M27-A

4. Place the Reel Table Height Gauge on the Post Adjustment Plate and set the gauge to zero 0 as shown in Figure M27-B.

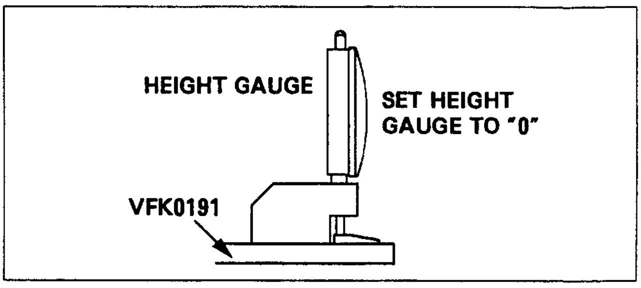

HEIGHT GAUGE
SET HEIGHT GAUGE TO "0"
VFK0191

Figure M27-B

5. Place the Reel Table Height Gauge as shown in Figure M27-C and turn the nut slowly until the gauge reads.

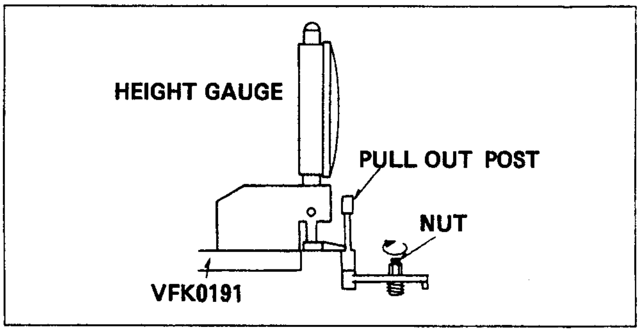

HEIGHT GAUGE
PULL OUT POST
NUT
VFK0191

Figure M27-C

6. After the adjustment, install the cassette compartment (Refer to reinstallation of Cassette Compartment).
7. Play back a normal cassette tape on Review search mode, and make sure that the edges of the tape are not curling or waving at the bottom end of the P4 post by using the Check Light as shown in Figure M27-D.

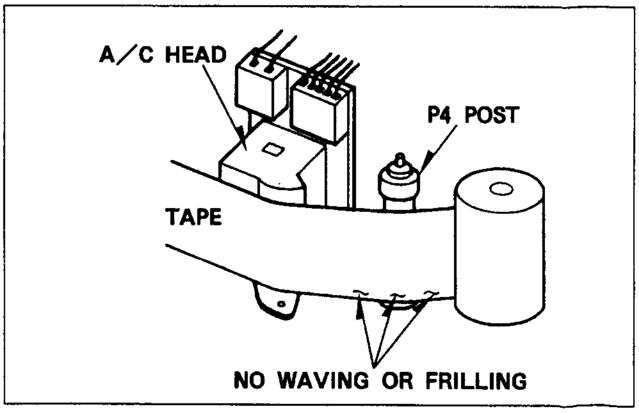

A/C HEAD
P4 POST
TAPE
NO WAVING OR FRILLING

Figure M27-D

Note: There is easy method to check Waving of Filling. If there is Waving or Filling in the lower edge, the white black pattern which is reflected on the tape will curve or not linear as shown in Figure M27-E.

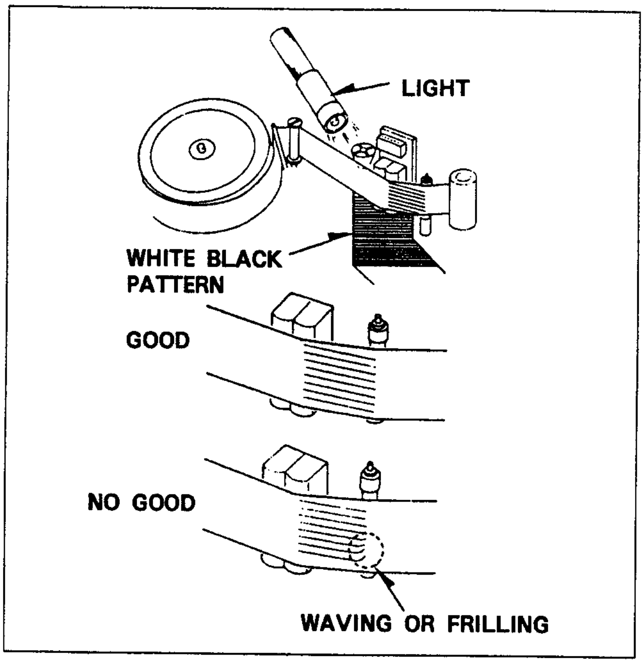

LIGHT
WHITE BLACK PATTERN
GOOD
NO GOOD
WAVING OR FRILLING

Figure M27-E

3-6-5. ADJUSTMENT OF A/C HEAD

A. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT

Note: This procedure should be performed only when the A/C Head is replaced.

<<TOOL>>

Check Light	;	VFK0948
Nut Driver	;	Purchase locally
VHS video Tape		

1. With the tape running, look at the lower edge of the control head by using the check light.
2. Adjust the Nut (A) as shown in Figure M28-A by turning the Nut (A) clockwise to lower the head, and counterclockwise to raise it.

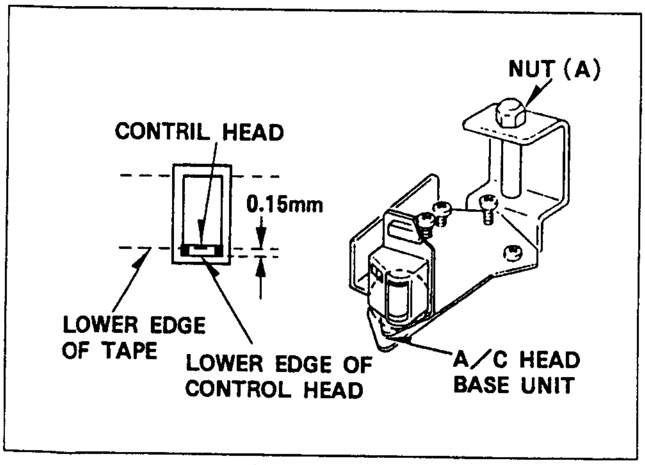

NUT (A)
CONTRIL HEAD
0.15mm
LOWER EDGE OF TAPE
LOWER EDGE OF CONTROL HEAD
A/C HEAD BASE UNIT

Figure M28-A

B. COARSE ADJUSTMENT OF THE A/C HEAD TILT

Note: This procedure should performed only when the A/C Head is replaced or posts heights are readjusted.

<<TOOL>>

Alignment Tape	;	VFM8180HADH
Check Light	;	VFK0948
Screwdriver (+)	;	Purchase locally
VHS Vide Tape		

1. Play back a VHS video tape which the amount of tape winding of a Take up Reel, Turn a screw (B) to clockwise until waving or Filling appears in the Lower edge of P4 post as Figure M28-B.

Note: There is easy method to check waving or Filling if there is waving or Filling in the lower edge. ZEBRA pattern which is reflected on the tape will curve or not linear (Figure M27-E).

2. Turn the screw (B) to counter-clockwise until waving or filling do not appear in the in the lower edge of P4 post.

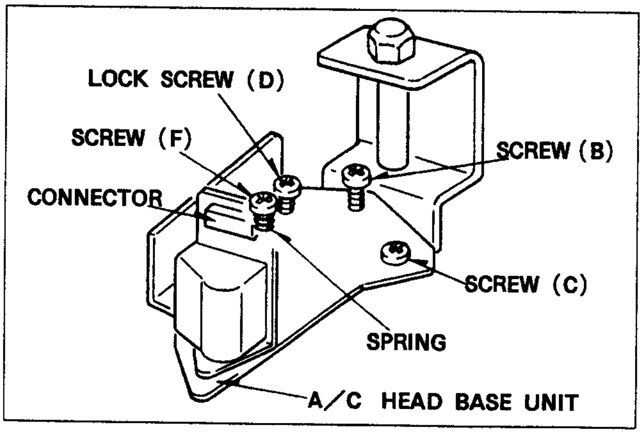

LOCK SCREW (D)
SCREW (F)
CONNECTOR
SCREW (B)
SCREW (C)
SPRING
A/C HEAD BASE UNIT

Figure M28-B

C. ADJUSTMENT OF A/C HEAD AZIMUTH

1. Connect the scope CH1 to test point (Normal Audio out put CH1) and the scope CH2 to test point (Normal Audio output CH2) on the Rear Jack.
2. Play back the 2-nd portion (Normal Audio 6KHz) of the alignment tape (VFM8180HADH).
3. Adjust the screw (C) so that these phases of both channels match as shown in Figure M28-C.

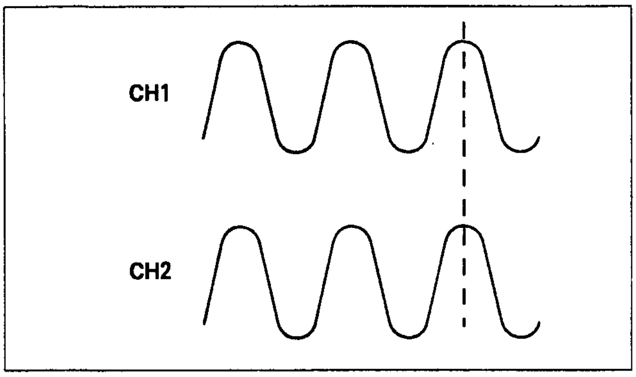


Figure M28-C

D. TILT and AZIMUTH ADJUSTMENT OF A/C HEAD

1. Adjust the screw (C) and (B) so that CH1 and CH2 output levels become maximum, these phase of both channels much at the same time (Figure M28-D). During this adjustment the Lock screw (D) dose not touch the A/C Head Base as shown in Figures M28-E.

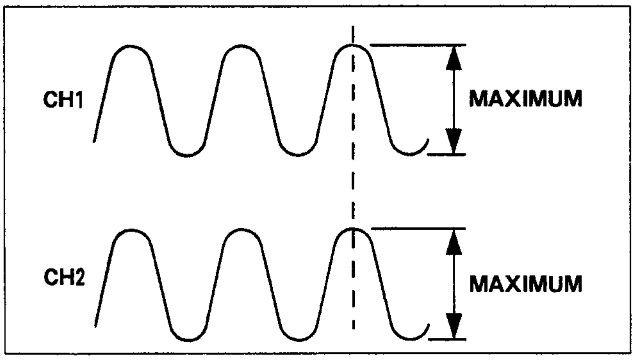


Figure M28-D

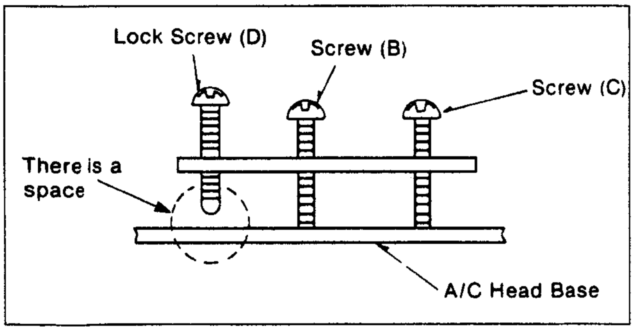

Lock Screw (D)
Screw (B)
Screw (C)
There is a space
A/C Head Base

Figure M28-E

E. ADJUSTMENT OF LOCK SCREW

1. Turn the screw (C) to clockwise so that the difference of phase of both channels become 180 degrees as shown in Figure M28-F.
2. Tighten the Lock screw (D) so that these phase of both channels match as shown in Figure M28-F.

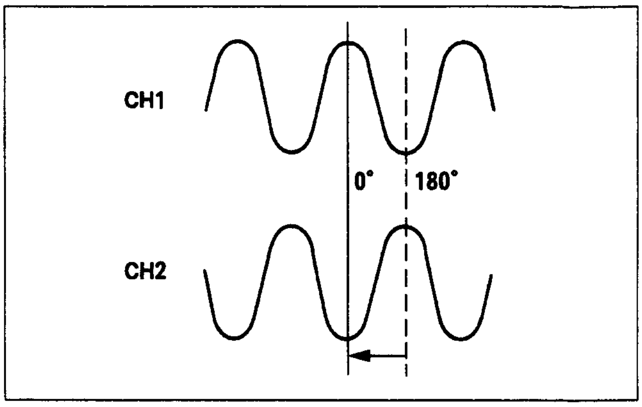


Figure M28-F

F. FINE ADJUSTMENT OF A/C HEAD HEIGHT

Note: Before this adjustment Coarse Adjustment of the A/C Head Height should be performed.

<<TOOL>>

Alignment Tape ; VFM8180HADH
Nut Driver ; Purchase locally

1. Connect a scope CH1 to test point (Normal Audio output CH1) and the scope CH2 to test point (Normal Audio output CH2) on the Rear Jack C.B.A.
2. Play back the 2-nd portion (Normal Audio 6KHz) of the Alignment Tape (VFM8180HADH)
3. Adjust the Nut (A)(Figure M28-A) so that the CH2 output level becomes maximum as shown in Figure M28-H.

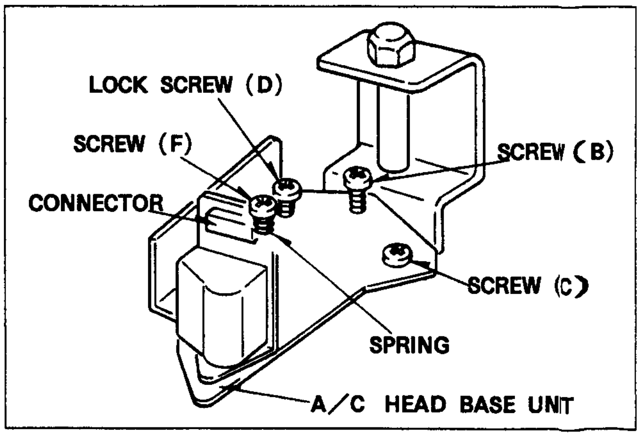

LOCK SCREW (D)
SCREW (F)
CONNECTOR
SCREW (B)
SCREW (C)
SPRING
A/C HEAD BASE UNIT

Figure M28-G

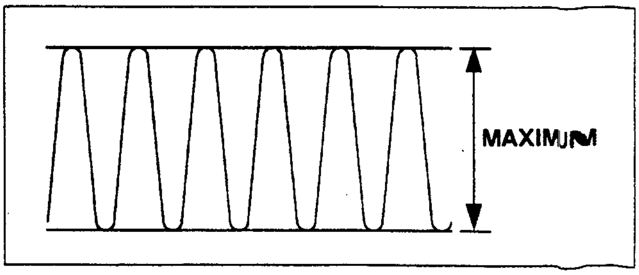


Figure M28-H

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

Note: This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>
H-Position Adjustment Screwdriver; VFK0328
Alignment Tape ; VFM8180HADH

1. Connect a scope CH1 to Video RF Test Terminal (TP6 of the Video 1 C.B.A.) and a scope CH2 to Normal Audio CH2 output on the Rear Jack.
2. Playback the 1 position (Monoscope 1 and Audio/Every 10-the field is skipped) of the Alignment tape VFM8180HADH.
3. Adjust the A/C head horizontal position screw so that the phase of audio drop out and video RF envelope drop-out becomes the same as shown in Figure M29

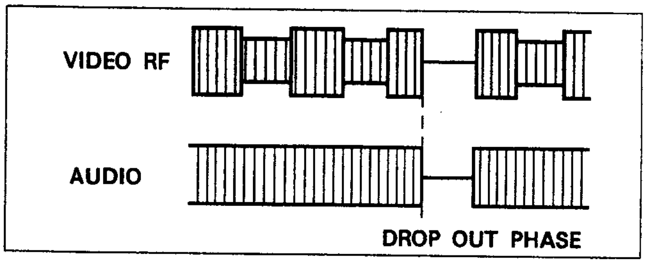


Figure M29

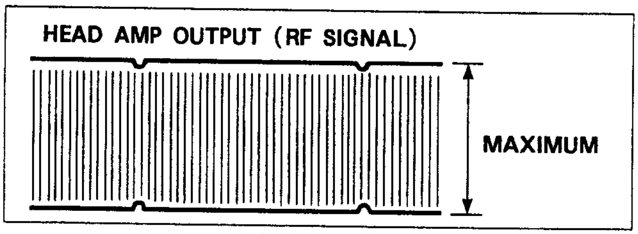
Note: After completion the fine adjustment of the A/C head horizontal position, the phase of Audio drop-out and Video RF envelope drop-out may be changed slightly.

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

Note: This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>
H-Position Adjustment Screwdriver ; VFK0328
Alignment Tape ; VFM8180HADH

1. Press the tracking control button "+" and "-" at same time to the center position.
2. Connect a oscilloscope to Video RF test Terminal.
3. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8180HADH).
4. Adjust the Horizontal Position Screw (Figure M29) of A/C head so that the RF signal becomes maximum level as shown in Figure M30.



Fiugre M30

3-6-8. ADJUSTMENT OF INCLINED BASE (T)

<<TOOL>>
Check Light ; VFM0948
Screwdriver (+) ; Purchase
VHS Video Tape

1. Play back the beginning portion of 180 minute normal cassette tape and confirm that waving or filling of P3 post is as shown in Figure M31-A

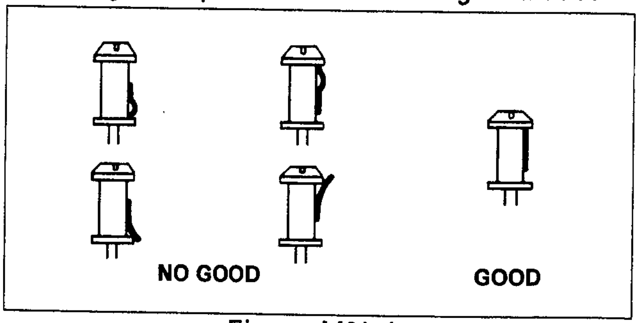


Figure M31-A

2. If there are waving at the lower and upper edge of the P3 post, Adjustment the inclined base of P3 post as shown in Figure M31-B.

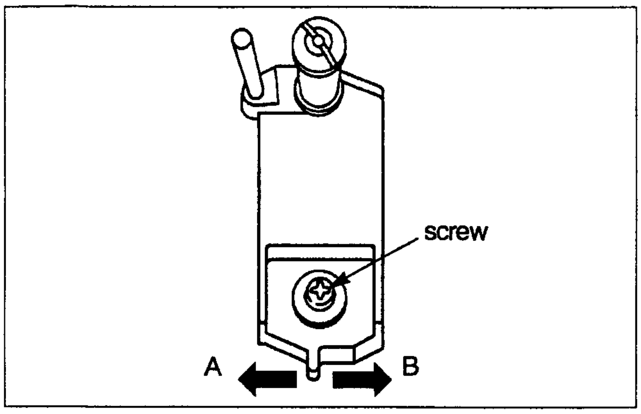


Figure M31-B

[When the inclined base is adjust to an arrow direction (B) tape becomes to lower edge.]

3. Confirm that tape position P3 post is upper edge and then tighten screw as shown in Figure M31-B.
4. Confirm that waving is occurred between upper side of P3 post and A/C head. If there is waving adjust the step 2.

Note: After adjust inclined base tapeinterchangeability and A/C head adjustment must be required.

3-6-9. ADJUSTMENT OF THRUST GAP

1. Turn the thrust adjustment screw clockwise to until the capstan rotor just separate from the capstan stator whit rotating the capstan rotor by hand.
2. Turn the thrust adjustment screw clockwise to 180 degrees from paint at step 1.
3. Set the 2 oil seal to edge of the capstan housing as shown in Figure M32.

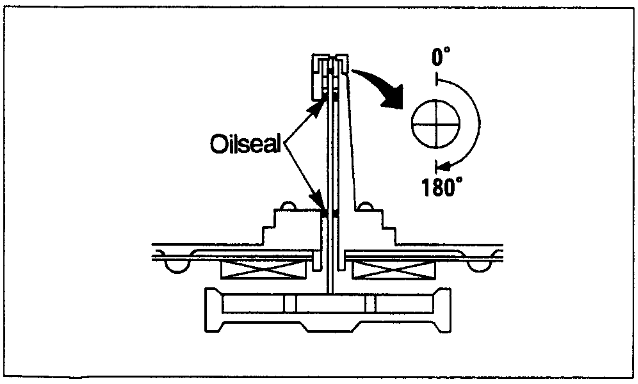


Figure M32

3-6-10. ADJUSTMENT OF FG GAP

<<TOOL>>
Fine Adj. screwdriver : VFK0330
Screwdriver : Porchase loclly

<<**SPEC**>> 0.16mm ± 0.04mm

1. Loosen screw (Q) and set the Fine Adjustment screw driver n the hole on the Capstan Stator Unit.
2. Adjust the gap between FG head and the Capstan Stator unit.
3. After adjustment tighten a screw (Q).

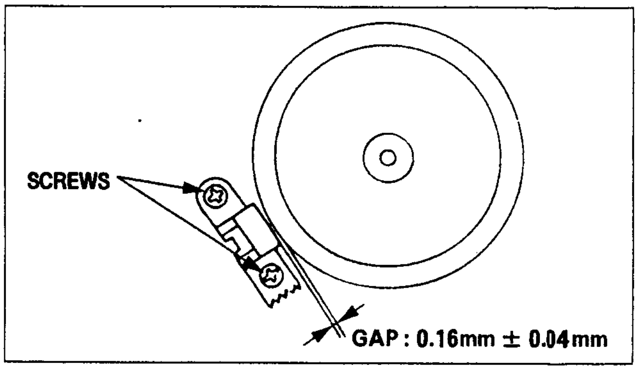


Figure M33-A

Note: After adjust FG head gap, FG output level confirmation must be required.
Do not touch the surface of rotor and keep any magnetizable material away.

CONFIRMATION OF FG OUTPUT LEVEL

1. Connect a oscilloscope to TP8009 (CAP FG output) on the Video 3 C.B.A.
2. Confirm that FG output level is within specification during PLAY/REC or PLAY mode.
3. If FG output level is out of specification.
Readjust the step 1 ~ 3 of FG GAP Adjustment.

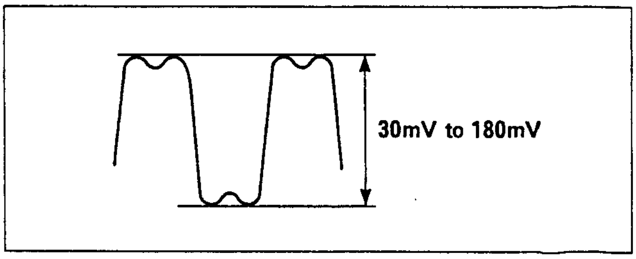


Figure M33-B

3-6-11. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

<<TOOL>>
Back Tension Meter ; VFK0132
VHS Cassette Tape(120min. tape except S-VHS tape)

A. FWD TENSION ADJUSTMENT

<<SPEC>>
23g ~ 27g

1. Play back the cassette tape from the beginning and wait until the tape movement get the stabilization (for approx. 10 to 20 seconds).
2. Pull the Impedance Roller in the direction indicated the arrow in Figure M34-A secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.

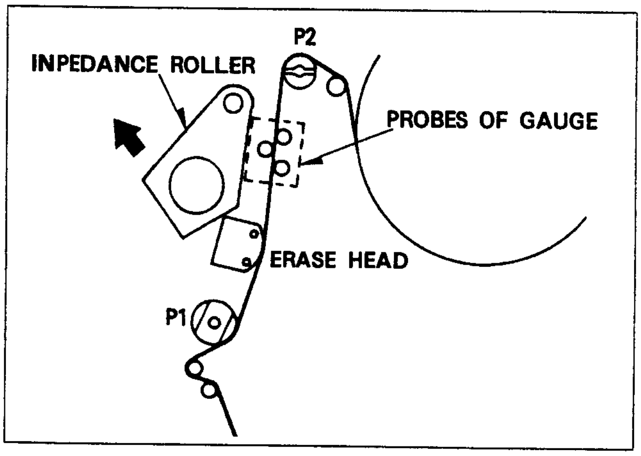


Figure M34-A Measurement of Back Tension

4. If it is out of specification, replace the Tension spring.

B. REV TENSION ADJUSTMENT

<<SPEC>>
30g ~ 60g

1. Play back the cassette tape on SP Reverse Play mode from the beginning and wait until the tape movement get the stabilization (for approx. 10 to 20 seconds).
2. Pull the Impedance Roller in the direction indicated by the arrow in Figure M34-B secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.
4. If it is out of specification, replace the Tension spring.

Note: While measuring, make sure that the three probes of the meter are all in good contact with the tape.
As the tension meter is very sensitive, we recommend taking 3 separate readings.

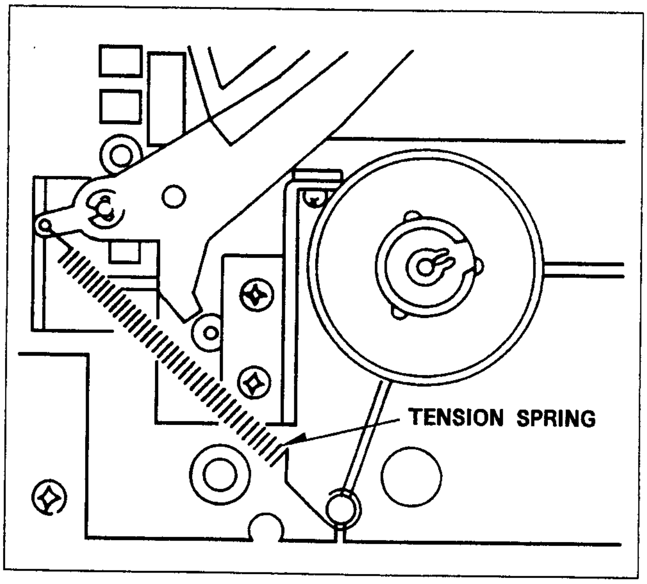


Figure M34-B

3-6-12. HEIGHT ADJUSTMENT OF THE REEL TABLES

<<TOOL>>

Post Adjustment Plate	;	VFK0191
Reel Table Height Gauge	;	VFK0190

<<SPEC>>
0 - 0.15mm

1. Remove the cassette compartment.
2. Place the post Adjustment Plate on the reel tables.
3. Place the Reel Table Height Gauge on the plate so that the scraper of the gauge touches the cut-out portion of the plate, then set the gauge to zero 0 as shown in Figure M35-A.

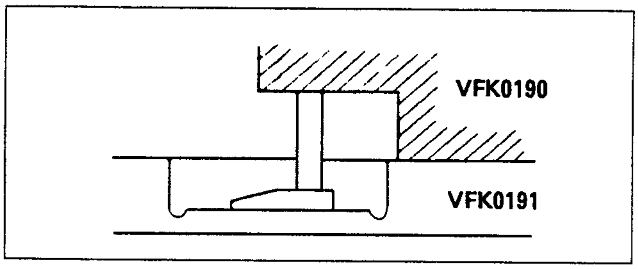


Figure M35-A

4. Measure the height of the top surface of either Reel table and note the difference in height from the plate cut-out (Figure M35-A and M35-B). Repeat this procedures for the other Reel Table.

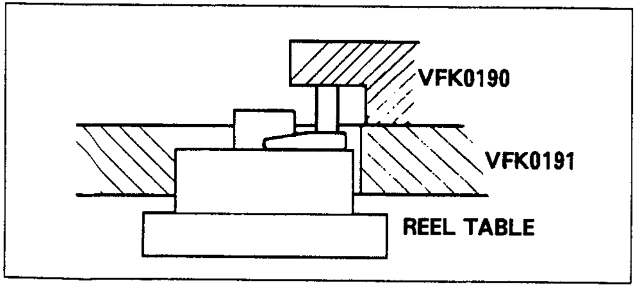


Figure M35-B

5. If the difference of Supply Reel table is more than 0.15mm higher or lower, replace the Supply Reel table. When the difference of Take Up Reel table is more than 0.15mm higher or lower, adjust nut (A)(Figure M35-C) so that measurement becomes the spec. If you can not adjust to the spec., replace Take Up Reel table.

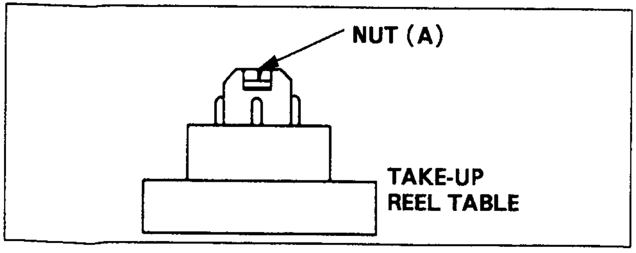


Figure M35-C

Note: When replacing the tables, the DD Reel Unit needs to be removed from the chassis. Remove 6 screws and carefully lift it out as shown in Figure M35-D.

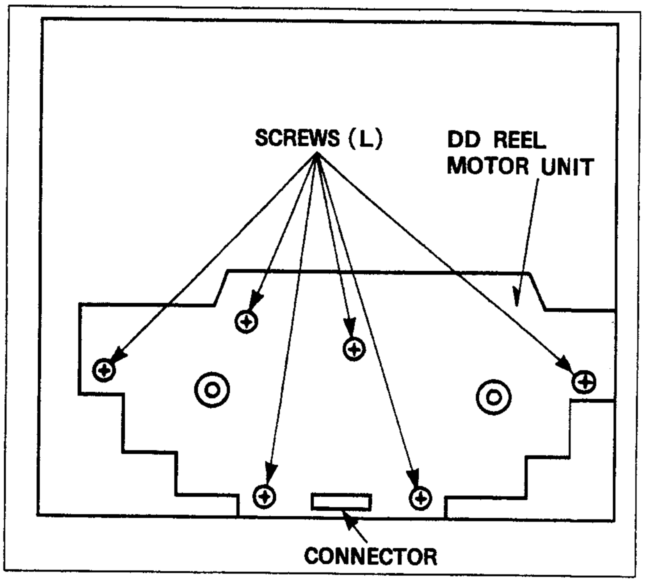


Figure M35-D Bottom View of DD Reel Unit

Note: When assembling the DD Reel Unit, slide a Main Rod to far left side by rotating the Center Gear, and then screw the 6 screws.

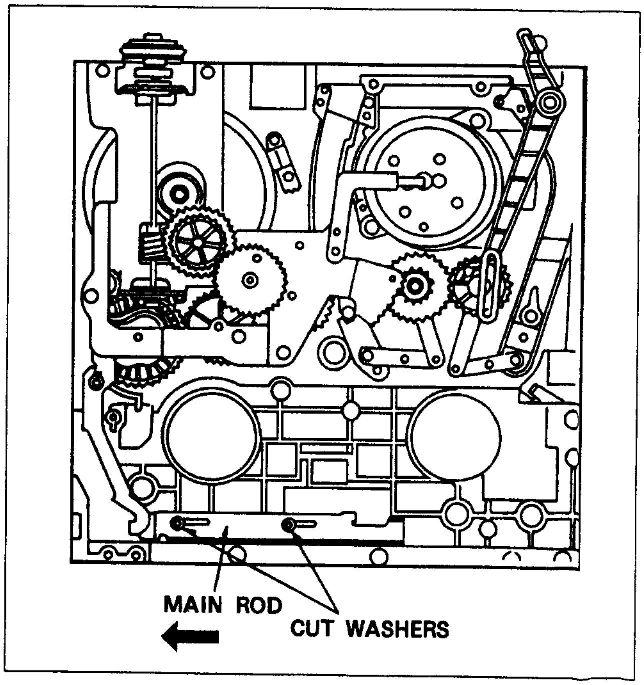


Figure M35-E

3-6-13. MEASUREMENT AND ADJUSTMENT OF THE BRAKE TORQUE

<<TOOL>>

Torque Gauge	; VFK0133
Adaptor for Gauge	; VFK0134

1. Remove the top cover and the cassette compartment.
2. Attach the adapter to the torque gauge and place the deck in STOP mode (Sub loading mode).
3. Place the torque gauge on the reel table as shown in Figure M36-A. The weight of the gauge should not rest on the reel table.
4. Turn the torque gauge in the direction indicated in Figure M36-B until the brake begins slipping and read the gauge.

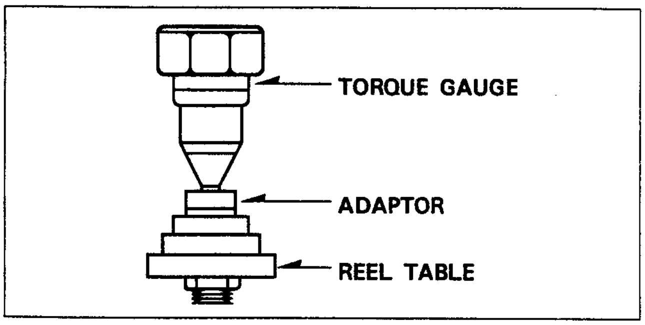
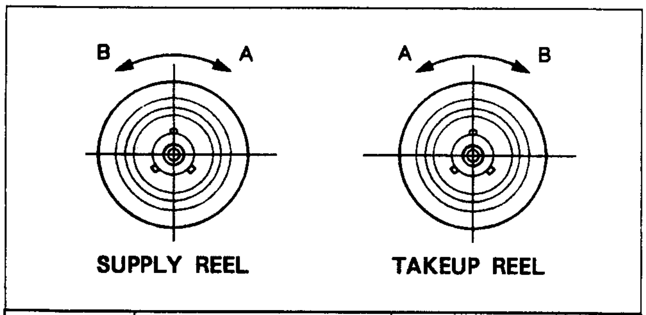


Figure M36-A Measuring Method



	A	B
Takeup	more than 550g-cm	more than 50g-cm
Supply		more than 50g-cm

Figure M36-B Specification of Btake Torque

5. If it is out of specification, replace the Brake Spring.

Note: If the proper brake torque cannot be obtained by replacing the Brake Spring, clean the braking surface of the reel table with a soft cloth and re-measure the brake torque. If its still out of specification, replace the Main Brake (S) or (T) Unit.

3-6-14. PRESSING FORCE CONFIRMATION OF PRESSURE ROLLER UNIT

<<TOOL>>

Fan Type Tension Gauge ; VFK66
VHS 120min, Cassette Tape

<<SPEC>>

1050g ± 230g

1. Remove the Cassette Compartment.
2. Play back the end portion of VHS (180min.) tape.
3. Set the Fan Type Tension Gauge to the part (A) of Pinch Roller Unit.
4. Press the Arm with the Gauge, in the direction indicated by the arrow as show in Figure M37.
5. Adjust the Solenoid Base so that the reading of the Tension Gauge is 1050g ± 230g at the moment of the tape running stop.
6. If it is out of specification, replace the Tension spring.

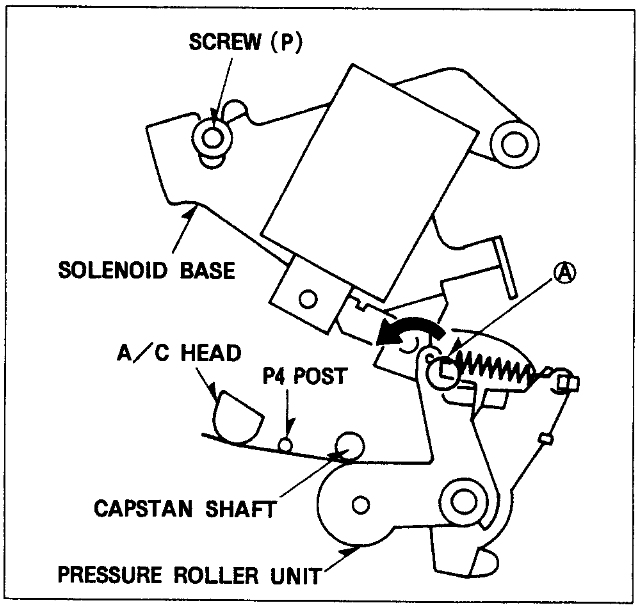


Figure M37

3-6-15. ADJUSTMENT OF REV TENSION SENSOR POSITION

<<TOOL>>

Tension Sensor Adj. Fixture	;	VFK0806
Tension Post Adj. Plate	;	VFK0236
Fine Adj. Screwdriver	;	VFK0330
Digital Volt Meter	;	Purchase locally

<<SPEC>>
2.3V ~ 2.7V

Note: Assemble a Tension Sensor Adjustment Fixture (VFK0806) and a Tension Post Adj. Plate (VFK0236) as shown in Figure M38-A.

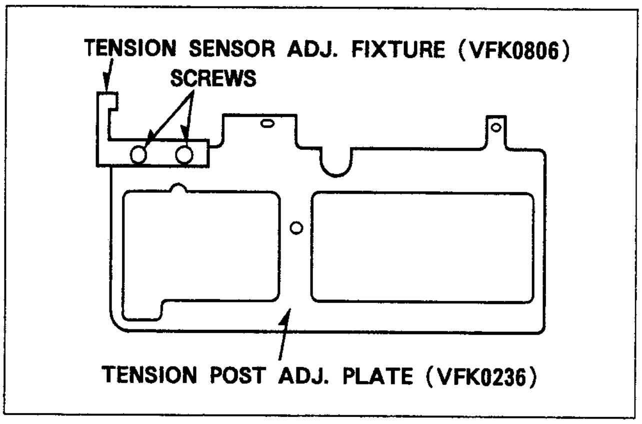

TENSION SENSOR ADJ. FIXTURE (VFK0806)
SCREWS
TENSION POST ADJ. PLATE (VFK0236)

Figure M38-A

1. Remove the Top Plate and Cassette Holder Unit. (refer to Disassemble Procedures)
2. Disconnect the 4pin and 2pin flat wire to the pin3 and 4 of the connector P1508.
3. Connect two wires of 4pin flat wire to the pin3and 4 of the connector P1508.
4. Push the Sub Wiper Arm (R) to direction of Cassette loading.
   Then the Sub Wiper Arm (R) goes down it self and mode of machine change to STOP.
5. Turn the Power switch off.
6. Remove the Cassette Compartment (refer to Disassembly Procedures).
7. Connect the V.T.V.M. of D.V.M. to TP8008 on the Video 3 C.B.A.
8. Place the Tension Post Position Adjustment Plate with the Fixture over the reel tables as shown in Figure M38-B.

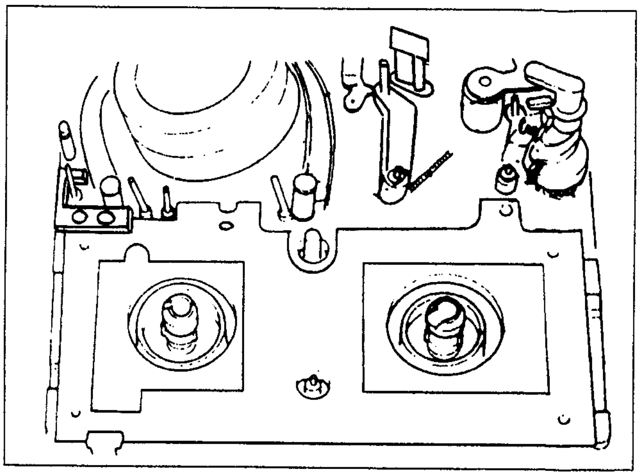


Figure M38-B

9. Turn the Power switch on.
10. Slightly loosen 2 screws (C). Insert a Fine Adj. Screwdriver in the hole (D)(Figure M38-C).

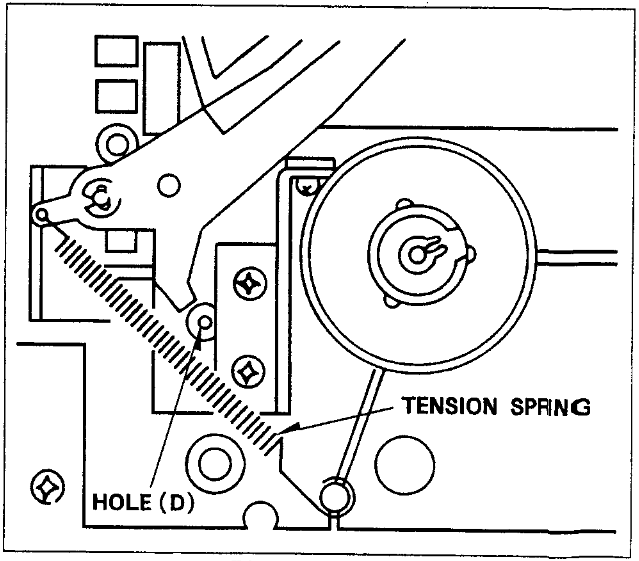


Figure M38-C

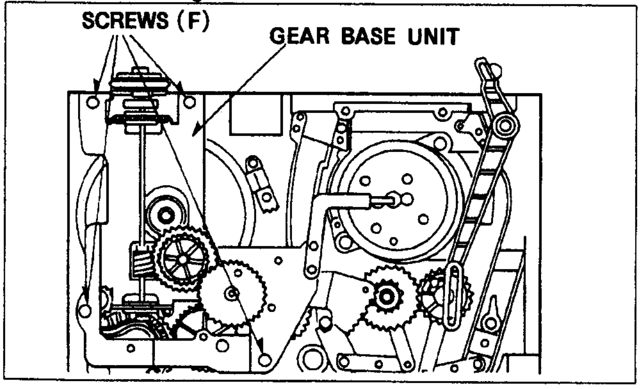
11. Press the PLAY button.
12. Adjust the Rev Sensor Position so that measurement becomes D.C. 2.3V ~ 2.7V.
13. Tighten the 2 Screws (C).
14. Remove the Tension Sensor Fixture.
15. Reinstall the Cassette Compartment.
16. Confirm Playback picture (Rev Playback mode, Playback mode etc.)

3-7. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit, through the mode select switch. Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on. If these parts are not fixed properly, the unit will be unloaded or compulsorily stopped. And it will result being damaged at any mechanical or electrical parts. The overall mechanical condition (alignment) of bottom and top view are shown in Figure M39-A and Figure M39-B. This mechanical adjustment is performed in the STOP mode.

3-7-1. CONFIRMATION OF ALIGNMENT CONDITION

1. Remove the Loading Belt.
2. Unscrew 4 screws (F) and remove the Gear Base Unit. (Figure M39-A)
3. Turn the Center Gear to counter-clockwise until 2 big holes of Center Gear align with 2 big holes of Retainer Gear and Ring Gear and Chassis as shown in Figure M39-C.


SCREWS (F)
GEAR BASE UNIT

Fiugre M39-A

4. Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam as shown in Figure M39-B.
5. P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
6. Small hole on Sub Cam Gear should align with small hole on the Connection Gear and rectangular mark on the Connection Gear should be at a 3 oclock position.
7. Pressure Roller Unit is UP position.

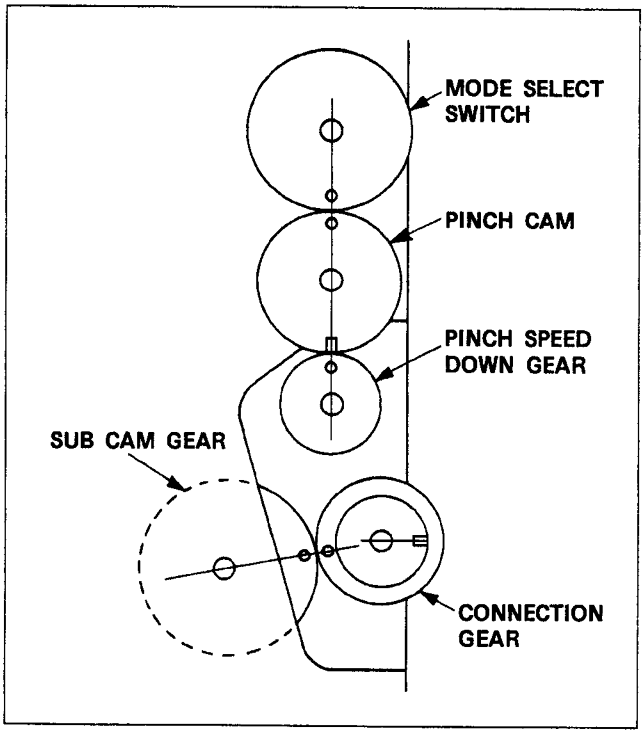

MODE SELECT SWITCH
PINCH CAM
PINCH SPEED DOWN GEAR
SUB CAM GEAR
CONNECTION GEAR

Figure M39-B Top View of Overall IQ-Mechanical Condition

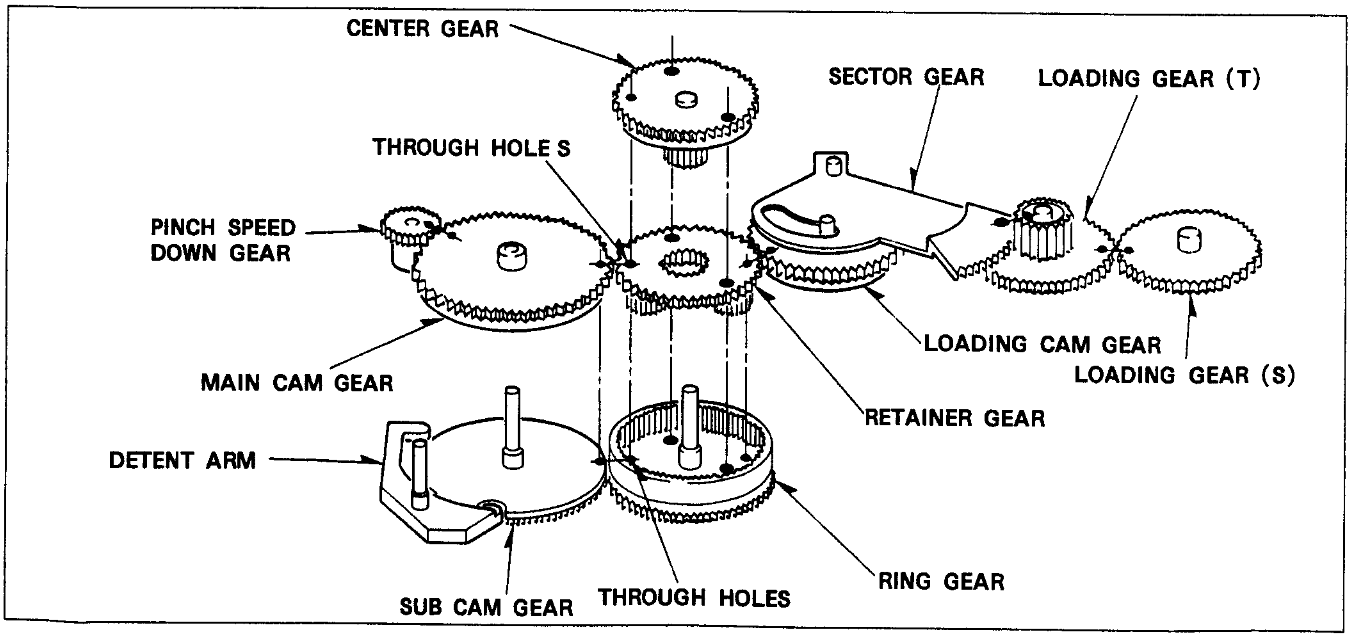

CENTER GEAR
SECTOR GEAR
LOADING GEAR (T)
THROUGH HOLE S
PINCH SPEED DOWN GEAR
LOADING CAM GEAR
LOADING GEAR (S)
MAIN CAM GEAR
RETAINER GEAR
DETENT ARM
RING GEAR
SUB CAM GEAR
THROUGH HOLES

Figure M39-C Bottom View of Overall Mechanical Condition

3-7-2. ASSEMBLY PROCEDURES OF SUB CAM GEAR RING GEAR AND DETENT ARM

1. Install the Ring Gear so that the two holes on the Ring Gear align with the two holes on the chassis as shown in Figure M40.
2. Install the Sub Cam Gear so that the large hole on Sub Cam Gear aligns with the hole on chassis.
   Also the small hole (located just outside of large hole) on Sub Cam Gear should align with the hole on Ring Gear as shown in Figure M40.
3. Confirm that the small hole on Sub Cam Gear is aligned with the small hole on Connection Gear as shown in Figure M39-B (In case of the Connection Gear is already installed).
4. Install the Detent Arm and make sure Detent Arm seats perfectly in detent of Sub Cam Gear as shown in Figure M40.

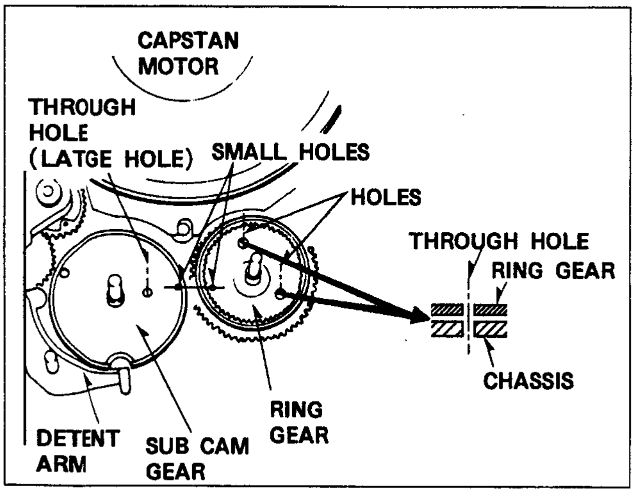

CAPSTAN MOTOR
THROUGH HOLE (LATGE HOLE)
SMALL HOLES
HOLES
THROUGH HOLE
RING GEAR
CHASSIS
RING GEAR
DETENT ARM
SUB CAM GEAR

Figure M40

3-7-3. ASSEMBLY PROCEDURES OF MAIN CAM GEAR AND PINCH SPEED DOWN GEAR

1. Install the Main Cam Gear on to the Sub Cam Gear so that the small hole on the Main Cam Gear aligns with small hole on the Ring Gear as shown in Figure M41.
2. Insert a retaining ring.
3. Install the Pinch Speed Down Gear from top side of chassis so that the small hole on the Main Cam Gear as shown in Figure M41.

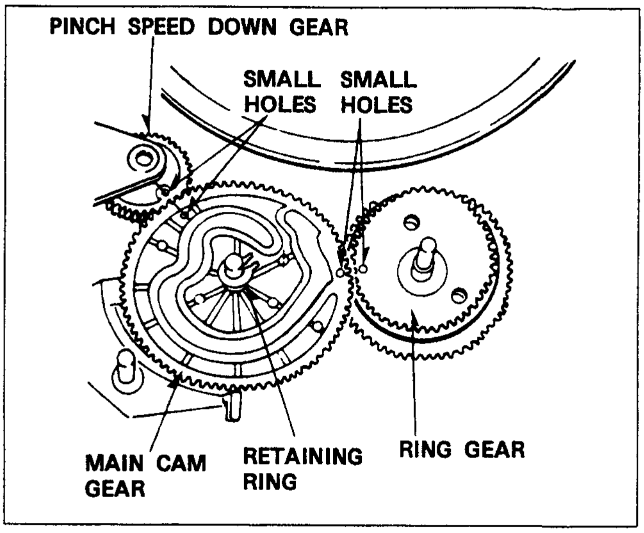

PINCH SPEED DOWN GEAR
SMALL HOLES
SMALL HOLES
MAIN CAM GEAR
RETAINING RING
RING GEAR

Figure M41

3-7-4. ASSEMBLY PROCEDURES OF LOADING CAM GEAR AND RETAINER GEAR

1. Install the Retainer Gear onto the Ring Gear so that the two holes on the Retainer Gear align with the two holes on the Ring Gear, at this time, small hole on the Main Cam Gear should aligns with small hole on the Retainer Gear as shown in Figure M42.
2. Install the Loading Cam Gear so that the small hole which is directly outside of the largehole on the Loading Cam Gear is aligned with the outside hole of the Retainer Gear as shown in Figure M42.

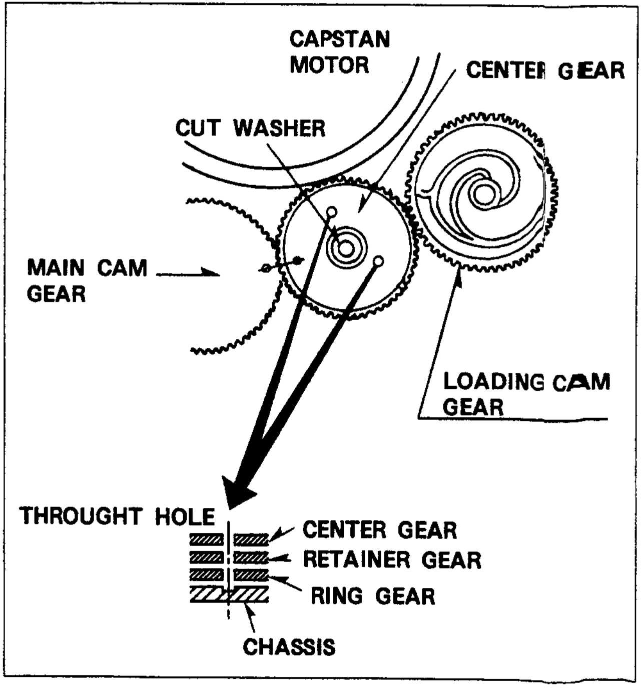

CAPSTAN MOTOR
CENTER GEAR
CUT WASHER
MAIN CAM GEAR
LOADING CAM GEAR
THROUGHT HOLE
CENTER GEAR
RETAINER GEAR
RING GEAR
CHASSIS

Figure M42

3-7-5. ASSEMBLY PROCEDURES OF CENTER GEAR

1. Softly Install the Center Gear onto the Retainer Gear so that the two holes in the Center Gear align with the holes on the Retainer Gear, then install the cut washer as shown in Figure M43.

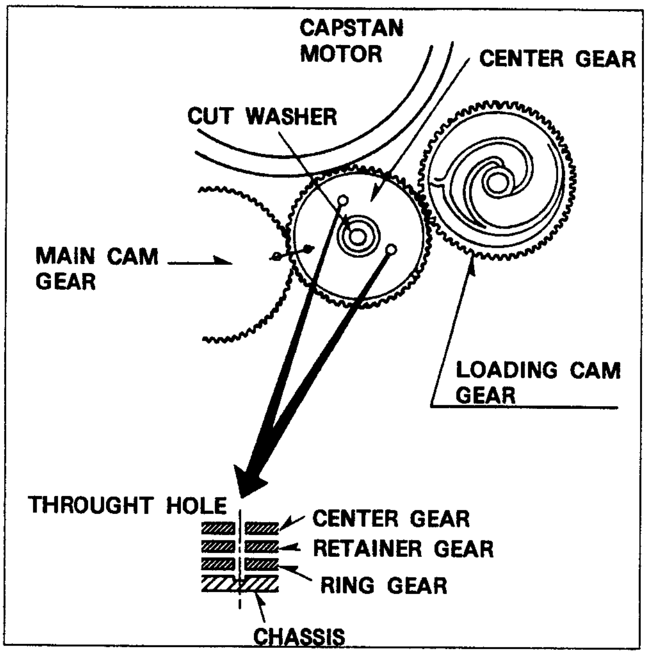

CAPSTAN MOTOR
CENTER GEAR
CUT WASHER
MAIN CAM GEAR
LOADING CAM GEAR
THROUGHT HOLE
CENTER GEAR
RETAINER GEAR
RING GEAR
CHASSIS

Figure M43

3-7-6. ASSEMBLY PROCEDURES OF MAIN LEVER AND CAM FOLLOWER ARM UNIT

1. Install the Main Rod and then insert the cut washers as shown in Figure M44.
2. Install the Cam Follower Arm so that the pin of the Cam Follower Arm inserts into the groove of the Main Cam Gear and also inserts into the slot on the Main Rod, insert the retaining ring.

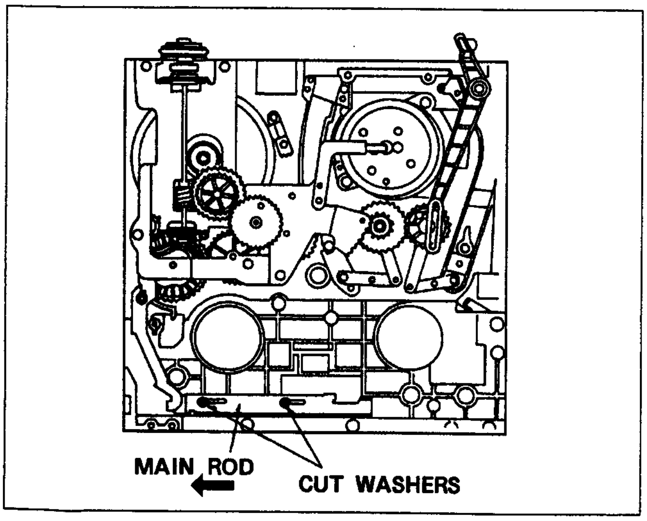

MAIN ROD
CUT WASHERS

Figure M44

3-7-7. ASSEMBLY PROCEDURES OF LOADING GEAR (T), LOADING GEAR (S) SECTOR GEAR

1. Set the P2 and P3 posts to fully unloaded position, then install the Loading Gear (T) and (S) so that the outer hole on the Loading Gear (T) aligns with the outer hole on the Loading Gear (S) as shown in Figure M45-A.
2. Install the Sector Gear so that the outer hole in the Sector Gear aligns with the projection mark on Loading Gear (T).
3. Insert 3 retaining rings as shown in Figure M45-B.

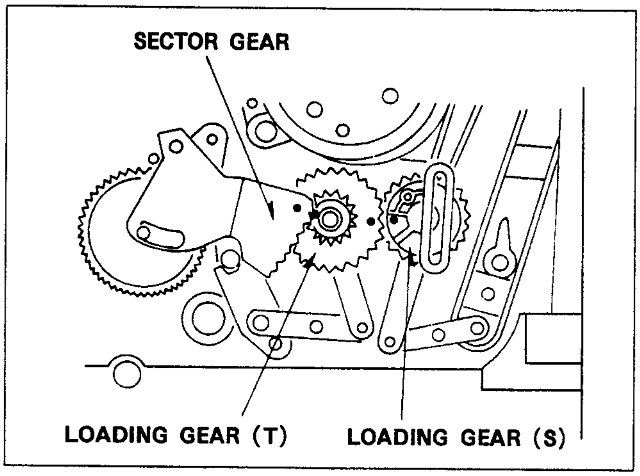

SECTOR GEAR
LOADING GEAR (T)
LOADING GEAR (S)

Figure M45-A

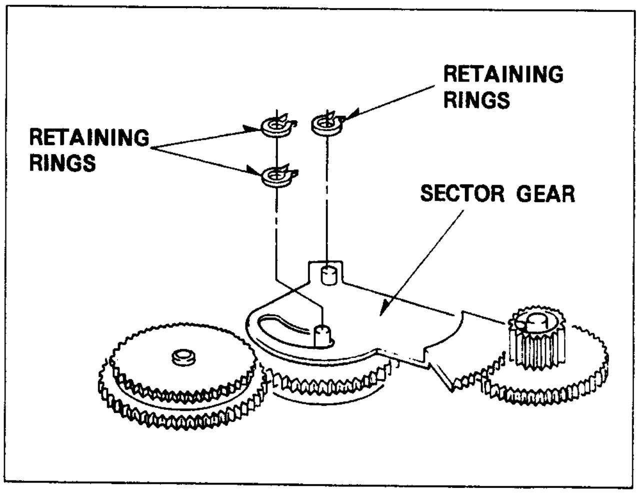

RETAINING RINGS
RETAINING RINGS
SECTOR GEAR

Figure M45-B

3-7-8. ASSEMBLY PROCEDURES OF CONNECTION GEAR

Note: Before assembling, Sub Cam Gear position (and positions of bottom side gears) must be correct as described before (Figure M39-B).

1. Install the Connection Gear so that the small hole on the Connection Gear aligns with the small hole on the Sub Cam Gear as shown in Figure M46.

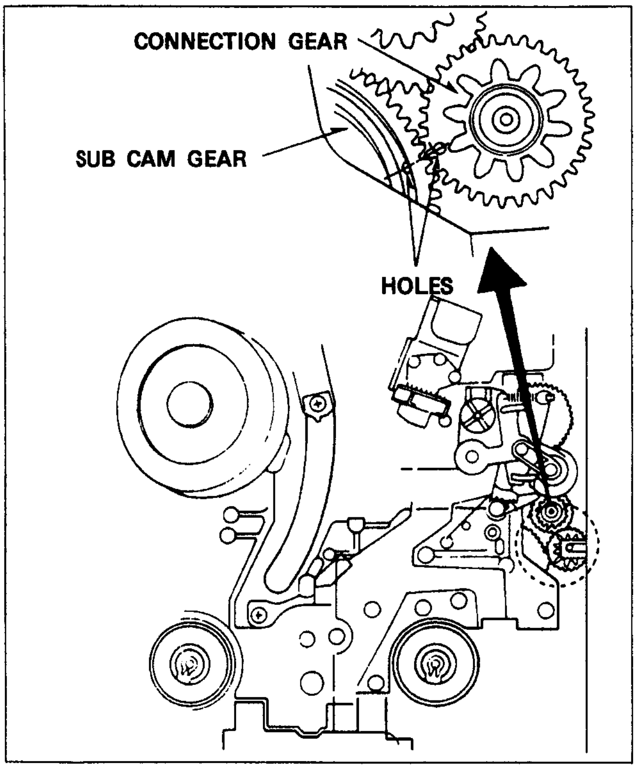

CONNECTION GEAR
SUB CAM GEAR
HOLES

Figure M46

3-7-9. ASSEMBLY PROCEDURES OF MODE SWITCH AND P5 PULL OUT SECTOR GEAR

1. Turn the Center Gear to unloading position.
2. Install the mode Select Switch and tighten the mounting screw, then solder the 5 soldering portions.
3. Install the P5 Pull Out Sector Gear so that the hole of P5 Pull Out Sector Gear aligns with the tip of gear at P5 Arm as shown in Figure M47.

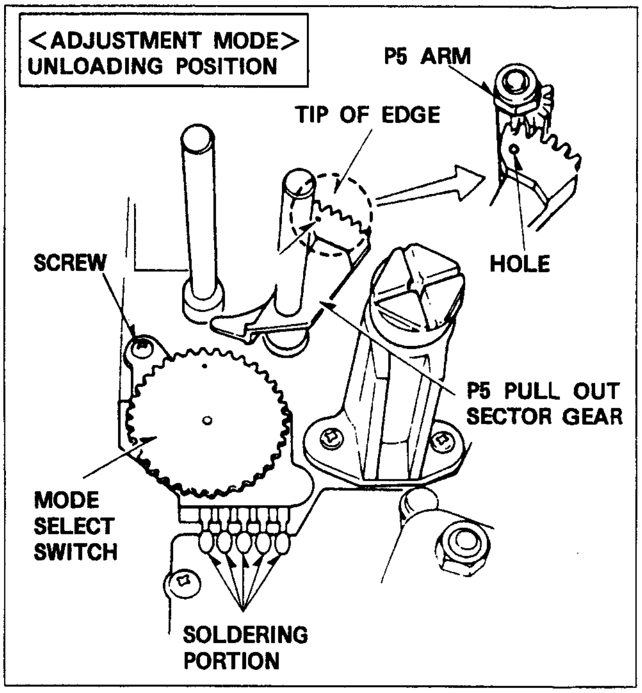

<ADJUSTMENT MODE>
UNLOADING POSITION
P5 ARM
TIP OF EDGE
SCREW
HOLE
P5 PULL OUT SECTOR GEAR
MODE SELECT SWITCH
SOLDERING PORTION

Figure M47

3-7-10. ASSEMBLY PROCEDURES OF PINCH CAM AND PRESSURE ROLLER UNIT

1. Install the Pinch Cam while pushing the P5 post forward. The gear of the Pinch Cam should drop to a seated position. In this position make sure hole in the Mode Select Switch aligns with small hole on the Pinch Cam, also the small rift on the Pinch Cam should align with the hole on the Pinch Speed Down Gear sa shown in Figure M48.
2. Install the Pressure Roller Unit. Make sure the seats perfectly onto the Pinch Cam, then install the Pinch Cam Cap.

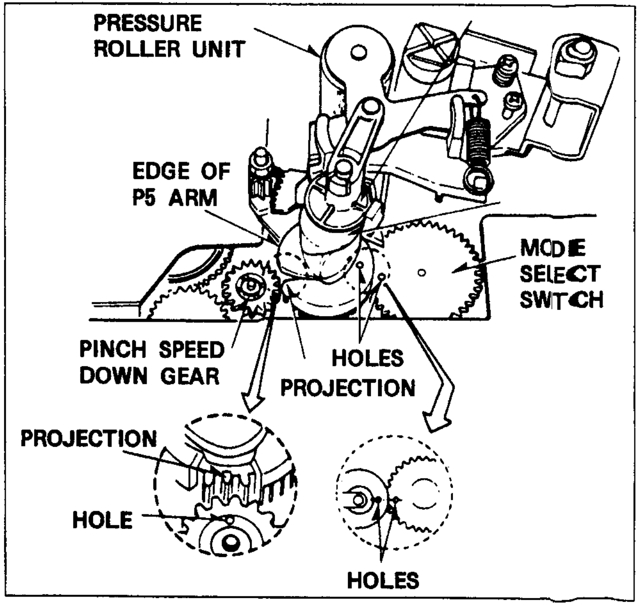

PRESSURE ROLLER UNIT
EDGE OF P5 ARM
MODE SELECT SWITCH
PINCH SPEED DOWN GEAR
HOLES
PROJECTION
PROJECTION
HOLE
HOLES

Figure M48

3-7-11. ASSEMBLY PROCEDURES OF GEAR BASE UNIT

1. Install the Gear Base Unit and screw 4 screws (F) as shown in Figure M49.

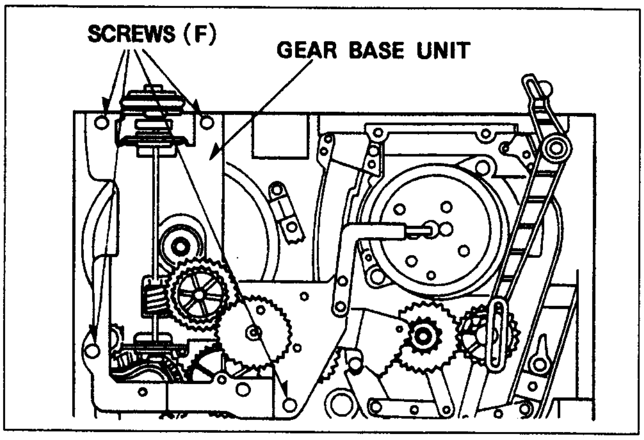


Figure M49

Note: The Gear Base Unit has 2 gears and worm shaft. There is no adjustment for these gears.

3-6-12. REINSTALLATION OF CASSETTE COMPARTMENT

When you reinstall the cassette compartment, the position adjustment of mechanism is necessary for correct operation, as follows.

A. Confirmation of STOP Alignment Condition

1. Turn the Worm shaft counter-clockwise or clockwise until mechanism is placed into the Alignment Condition as following conditions.
   a) Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam. (Figure M48)
   b) P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
   c) Small hole on Sub Cam Gear should align with small hole on the Connection Gear (Figure M46) and rectangular mark on the Connection Gear should be at a 3 oclock position.
   d) Pressure Roller Unit is UP position.

B. Confirmation of Cassette Compartment

1. Confirm that the Cassette Compartment is aligned properly. In the EJECT position (Cassette Holder up and advanced to the front) the two V-shaped marks on the slide switch should align. The slide switch is located on the right side of the Cassette Assembly towards the rear as shown in Figure M50A.

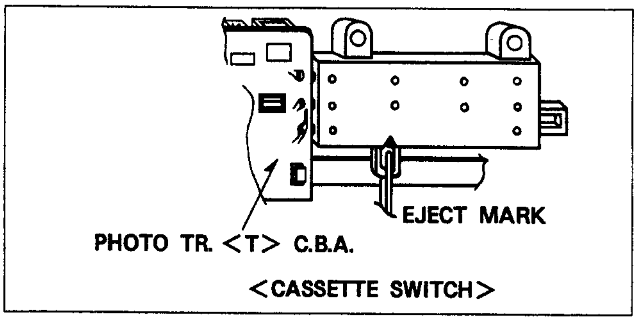


Figure M50-A

2. Remove 3 screws (A) as shown in Figure M50-B.
3. Take the top plate out.
4. Take the cassette Holder unit out as shown in Figure M50-C.

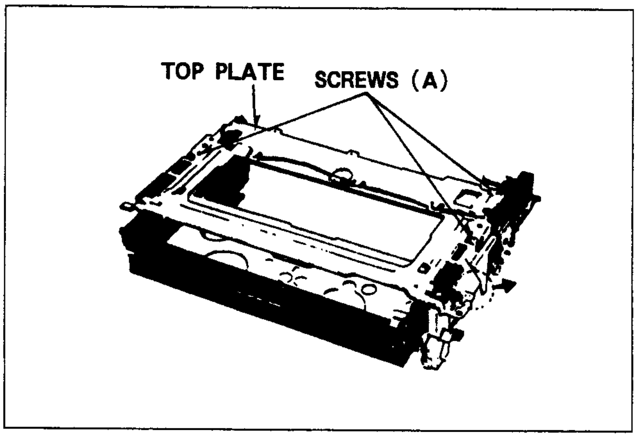


Figure M50-B

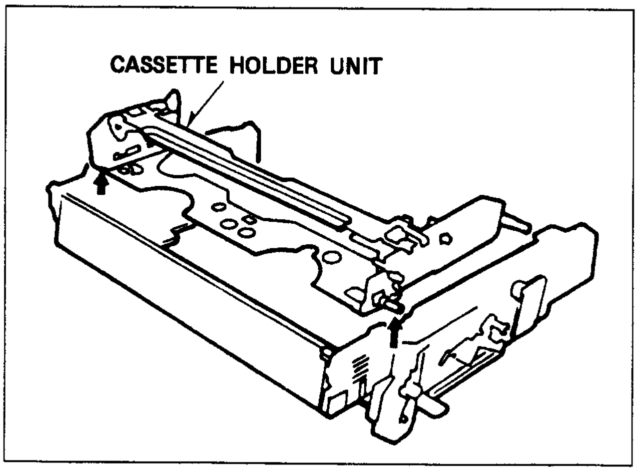


Figure M50-C Removal of Cassette Holder Unit

5. Press the sub wiper arm (R) to direction indicated by arrow so that the sub wiper arm (R) comes to cassette down position (STOP) completely as shown in Figure M50-D and keepit. In this position, the arrow on the Sub Wiper Arm (R) should align with the arrow on the Rack (A)(1) Unit as shown in Figure M50-E.

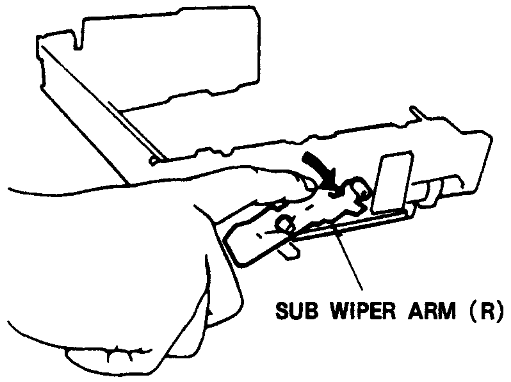

SUB WIPER ARM (R)

Figure M50-D

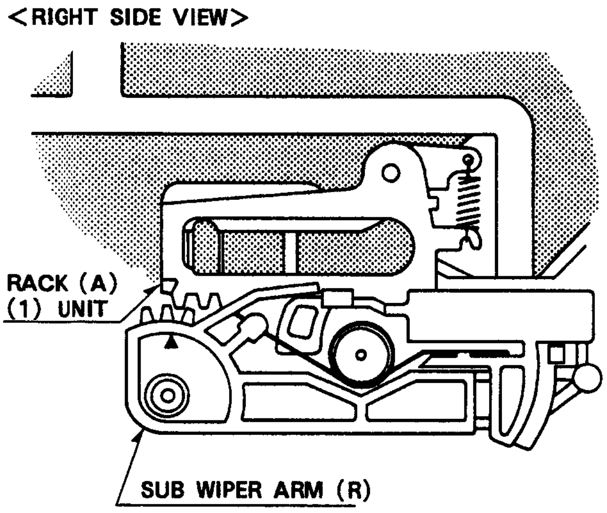

<RIGHT SIDE VIEW>
RACK (A) (1) UNIT
SUB WIPER ARM (R)

Figure M50-E

6. If the Cassette Compartment is not aligned, realignment may be accomplished by pushing the Main Shaft Unit to the right (gently) and pushing the front of the Rack Unit to the left. This procedure will disengage the teeth of the Rack Gear from the teeth on Sub Wiper Arm assembly.
This will allow you to change the positional relationship between the Sub Wiper Arm Assembly and Rack Unit. This procedure is best attempted in the EJECT position. Once this is done, check for smooth operation of the compartment by inserting a cassette, and pushing in, and down.

C. Installation Procedure

1. Bring loading mechanism to the STOP (Sub-load) position.
2. Confirm that the chassis is aligned properly for Alignment Condition as shown in Figure M39-B and M39-C.
3. Put the Sub Wiper Arm (R) in its full down position (Sub Wiper Arm should rest on plastic protrusion on the bottom of the right side plate).
4. Install the cassette compartment (without cassette holder) to chassis so that the rectangular marking (or slot) on the connection gear should be line up with first tooth of the Rack Gear as shown in Figure M50-F and M50-G.

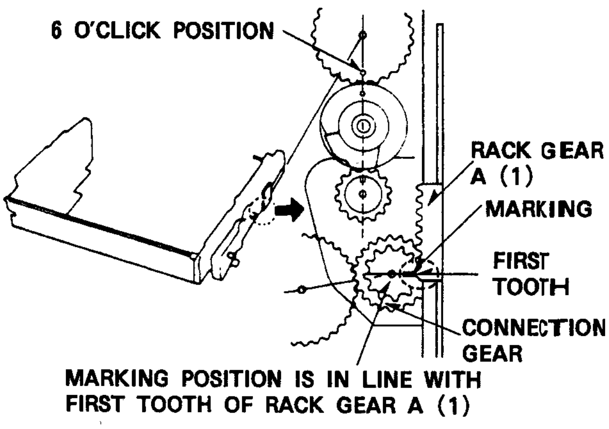

6 O'CLICK POSITION
RACK GEAR A (1)
MARKING
FIRST TOOTH
CONNECTION GEAR
MARKING POSITION IS IN LINE WITH FIRST TOOTH OF RACK GEAR A (1)

Figure M50-F

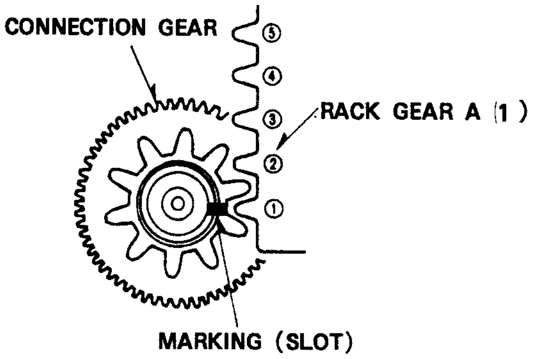

CONNECTION GEAR
⑤
④
③
②
①
RACK GEAR A (1)
MARKING (SLOT)

Figure M50-G

5. Tighten the 4 screws (D) as shown in Figure M50-H.

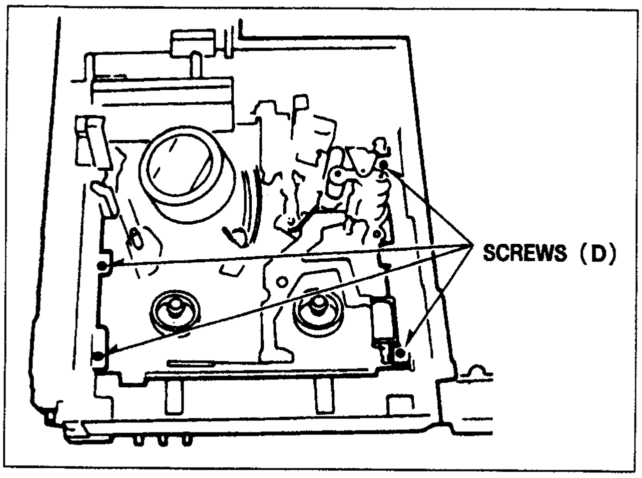


Figure M50-H

6. Manually move the loading mechanism toward the EJECT position.
7. Stop the manual eject procedure just before completion, so that the Sub Wiper Arms straight up. This position is also characterized by the channel guides (in the Wiper Arms) being directly under the cut outs on the top of the Cassette Compartment base (Figure M50-I).
8. Install the Cassette Holder Unit in the Cassette Compartment Base. The Cassette holder should drop into place if the Sub Wiper Arms are portioned as called for in step 7.

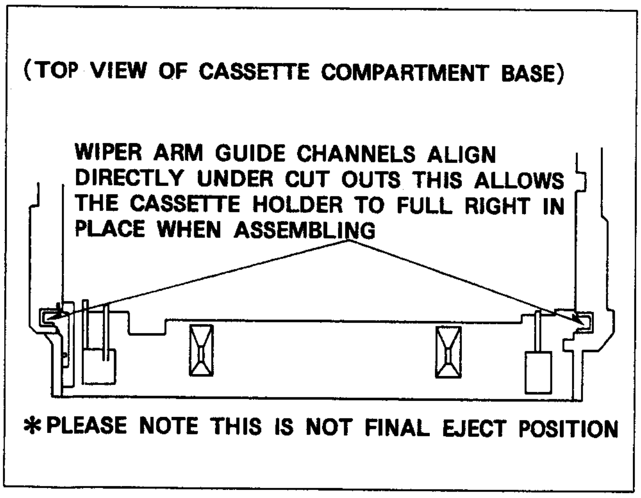

(TOP VIEW OF CASSETTE COMPARTMENT BASE)
WIPER ARM GUIDE CHANNELS ALIGN DIRECTLY UNDER CUT OUTS THIS ALLOWS THE CASSETTE HOLDER TO FULL RIGHT IN PLACE WHEN ASSEMBLING
*PLEASE NOTE THIS IS NOT FINAL EJECT POSITION

Figure M50-I

Note: For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Figure M50-J.

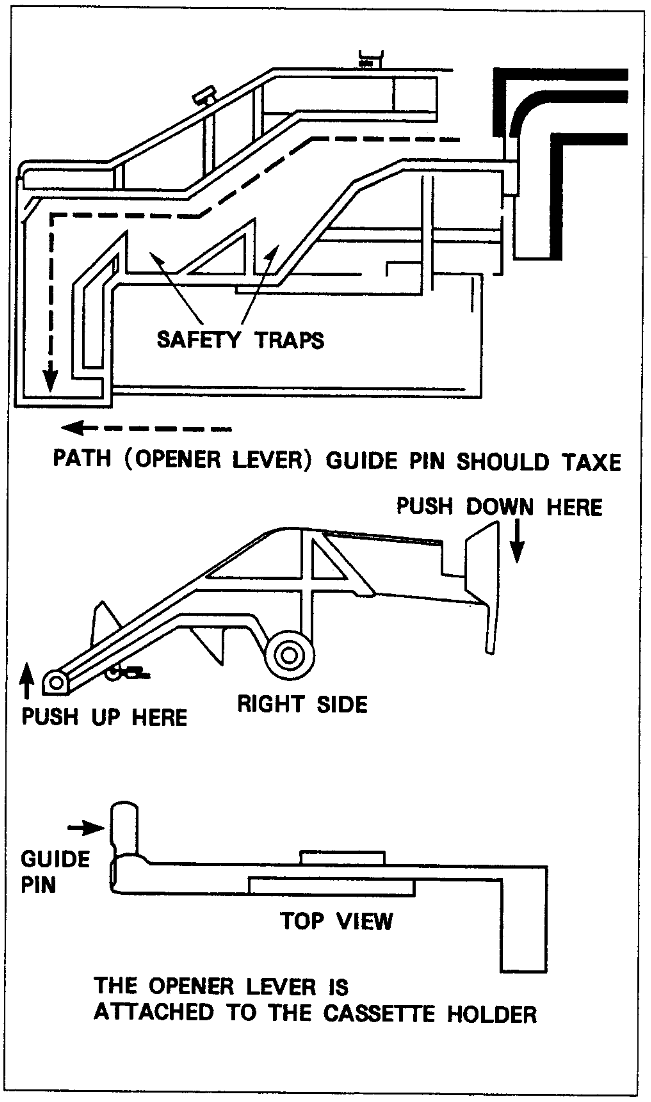

SAFETY TRAPS
PATH (OPENER LEVER) GUIDE PIN SHOULD TAXE
PUSH DOWN HERE
PUSH UP HERE
RIGHT SIDE
GUIDE PIN
TOP VIEW
THE OPENER LEVER IS ATTACHED TO THE CASSETTE HOLDER

Figure M50-J Right Side Plate

9. Install the top plate on the Cassette Compartment Base and tighten the 3 screws (A) as shown in Figure M50-B.
10. Manually confirm that front loading and main loading run smoothly. Also confirm EJECT before power is applied.

SECTION 4

ELECTRICAL ADJUSTMENTS

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  4-3-3 Slow Tracking Adj 4-3
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  4-3-32 Hi-Fi Audio Current Adj 4-14

4-1. TEST & SERVICE EQUIPMENT

To perform the electrical adjustment completely the following equipments are required.

1. VTVM (Vacuum Tube Volt Meter)
   Capacity : 0.001 to 50V
2. DVM (Digital Volt Meter)
   Capacity : 0.001 to 50V
3. Dual-Trace Oscilloscope (with probes)
   Capacity : 0.005 to 50V/div, DC to 30MHz
4. Frequency Counter
   Capacity : 0 to 10MHz
5. Sine Wave Signal Generator (RC Oscillator)
   Capacity : 0 to 10MHz
6. Video Signal Generator (Composite)
7. Spectrum analyzer
8. Color Monitor TV
9. Waveform Monitor
10. Alignment Tape (VFM8080HQFP)

4-2. HOW TO READ THE ADJUSTMENT PROCEDURE TABLE

BOARD	MAIN C.B.A.
TP	TP3502 [F-2]
ADJ	VR2002 [A-3]
TAPE	ALIGNMENT TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	T = 8.5 ± 0.5H

BOARD:	Adjustment position of Print Circuit Board.
TP:	Connection point (Test Point) of measuring equipment * ( ) shown TP location on the board.
ADJ.:	Adjustment component * ( ) shown VR location on the board.
TAPE:	Tape for adjustment.
INPUT:	Supply a signal for adjustment.
MODE:	Mode of VTR. Example: REC → PLAY is recording signal and playback the portion just recorded.
M.EQ:	Measuring equipment.
SPEC:	Specification for adjustment.

4-3. ELECTRICAL ADJUSTMENT PROCEDURES

4-3-1. PG SHIFTER ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8002(HEAD SW)(A-1), VIDEO OUT
ADJ	VR2002(A-4)
TAPE	VFM8180HADH PORTION: 2
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	T = 8.5 ± 0.5H

Note: This adjustment should be performed only after completion of the Tape Interchangeability adjustment.

1. Playback the alignment tape at the portion 2.
2. Connect the oscilloscope to TP8002 for CH1 and Video Out for CH2.
3. Adjust VR2002 so that the falling edge of switching pulse becomes 8.5 ± 0.5H before the V-sync portion as shown in Figure E1.

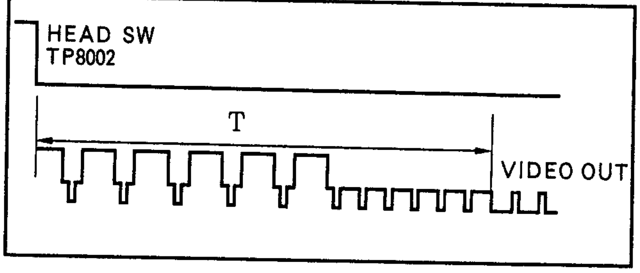


Figure E1

4-3-2. SLOW FREE RUN ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8009(A-1)
ADJ	VR2001(A-4)
TAPE	VFM8180HADH, PORTION: 2
INPUT	
MODE	PLAY PAUSE
M.EQ	FREQUENCY COUNTER
SPEC	455Hz ± 5Hz

1. Playback the alignment tape at the portion 2.
2. Connect a jumper wire between TP8006 and GND on the Video 3 C.B.A.
3. Connect the frequency counter to TP8009 on the Video 3 C.B.A.
4. Adjust VR2001 so that the reading of frequency counter is f = 455Hz ± 5Hz.
5. After this adjustment remove the jumper wire from TP8006 and GND.

4-3-3. SLOW TRACKING ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	VIDEO OUT
ADJ	FWD: VR2005(A-3), REV: VR2006(A-3)
TAPE	COLOUR BAR SIGNAL RECORDED TAPE
INPUT	
MODE	SLOW PLAY BACK
M.EQ	MONITOR TV
SPEC	NO NOISE BAR

Note: This adjustment should be performed only after completion of 4-3-2. SLOW FREE RUN adj.

1. Record the colour bar signal for a few minutes.
2. Playback the recorded portion in still mode.
3. Push the tracking button "+" and "-" at same time.
4. Adjust VR2005 and VR2006 so that the noise bar dose not appear and lower on the monitor TV.

4-3-4. V-LOCK ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	VIDEO OUT
ADJ	VR2004(A-3)
TAPE	BLANK TAPE
INPUT	COLOUR BAR
MODE	STILL
M.EQ	MONITOR TV
SPEC	NO V-DANCING

Note: This adjustment should be performed only after completion of 4-3-3. SLOW TRACKING Adj.

1. Record the colour bar signal for a few minutes.
2. Playback the recorded portion in still mode.
3. Adjust VR2004 so that the V-dancing dose not appear and lower on the monitor TV.

4-3-5. AUTO TRACKING GAIN ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3005(D-3)
ADJ	VR3005(C-2)
TAPE	
INPUT	SINE WAVE (4MHz, 200mVp-p)
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	2.5V ± 0.1V

[SET UP]
S-VHS : OFF
INPUT : LINE

1. Set the sinewave generator output to 4MHz, 200mVp-p.
2. Supply the sinewave signal to TP3006.
3. Connect the oscilloscope to TP3005.
4. Adjust VR3005 so that the level is 2.5V ± 0.1V.

4-3-6. DOC BALANCE ADJ.

BOARD	VIDEO 1
TP	TP3001(B-1)
ADJ	VR3001(E-1)
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	LESS THAN 50mVp-p

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to TP3001.
3. Adjust VR3001 so that the video level becomes minimum as much as possible (Figure E2).

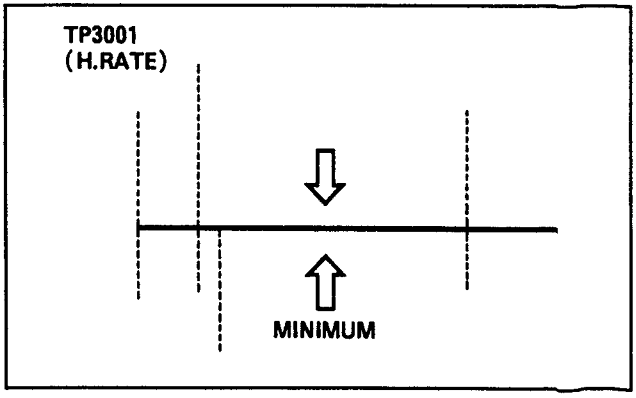


Figure E2

4-3-7. CNR ADJ.

BOARD	VIDEO 1 C.B.A.
TP	T3804(A-1)
ADJ	VR3803(A-1), VR3806(A-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	C LEVEL = MINIMUM

Note: This adjustment should be always completed after 4-3-6. DOC BALANCE adj.

[SET UP]
S-VHS SW = ON

1. Record the colour bar signal a few minutes by the S-VHS mode.
2. Connect the oscilloscope to TP3804.
3. Playback the just recorded portion.
4. Adjust VR3803 and VR3806 mutually so that chroma signal becomes minimum as possible.

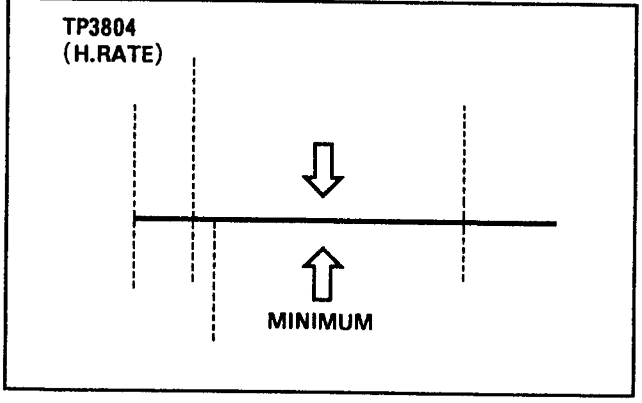


Figure E3

4-3-8. CHARACTER POSITION ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	C3111 (B-1)
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	MONITOR
SPEC	SEE FIGURE

1. Supply a colour bar signal to the video input.
2. Set the MENU Switch to SET.
   The menu screen appears on the monitor TV. (If the Hour Meter is appeared, advance to the next page by using the PLAY (-) or REC (+) button.)
3. Adjust C3111 so that the end of the cursor is located as shown in Figure E4.

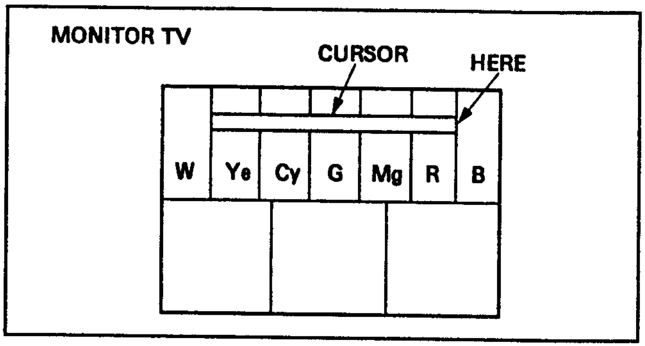


Figure E4

4-3-9. A/D INPUT LEVEL ADJ.

BOARD	VIDEO 3
TP	TP8001(D-1)
ADJ	VR8001(D-1)
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	2.4Vp-p ± 0.05Vp-p

[SET UP]
INPUT : LINE

1. Supply a colour bar signal to video input.
2. Connect the Oscilloscope to TP8001.
3. Adjust VR8001 so that video level is 2.4Vp-p ± 0.05Vp-p as shown in Figure E5.

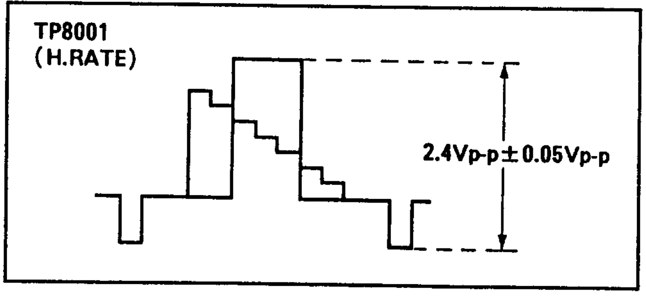


Figure E5

4-3-10. E-E OUTPUT LEVEL ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3305
TAPE	
INPUT	COLOUR BAR SIGNAL
MODE	E-E
M.EQ	WAVE FORM MONITOR
SPEC	Y : LEVEL = 1.0 ± 0.02Vp-p C : LEVEL = 0.65 ± 0.15VP-P

[SET UP]

INPUT SW : LINE

1. Supply the colour bar signal to video input.
2. Connect the waveform monitor to video output with a 75Ω termination.
3. Adjust VR3305 so that the Y level becomes 1.0 ± 0.02Vp-p as shown in Figure E6.
4. Confirm the cyan level are 0.65 ± 0.15Vp-p.

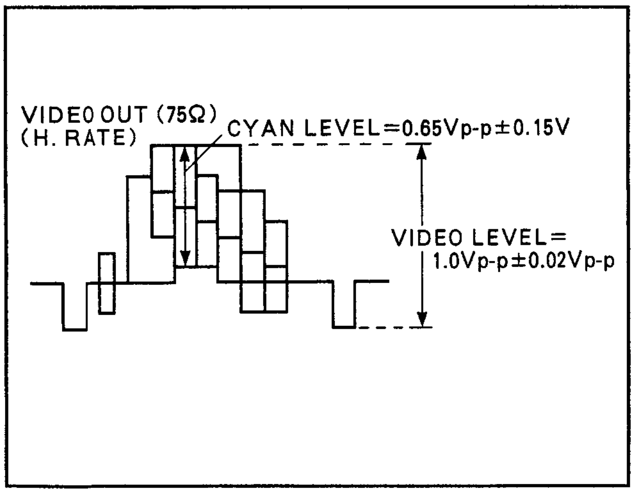


Figure E6

4-3-11. S-VHS RECORDING CURRENT ADJ.

BOARD	VIDEO 1 C.B.A. / HEAD AMP C.B.A.
TP	TP5003(H)(B-4), TP5002(L)(B-4)
ADJ	VR5001(REC-Y)(B-4), VR5002(REC-C)(B-4)
TAPE	S-VHS BLANK TAPE
INPUT	COLOUR BAR SIGNAL
MODE	REC
M.EQ	OSCILLOSCOPE
SPEC	35mVp-p±2mVp-p(C),150mVp-p±10mVp-p(Y)

[SET UP]

S-VHS SW : ON
INPUT : LINE

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to TP5003 (HOT) and TP5002 (GND).
3. Place the unit in recording mode with colour bar signal.
4. Before chrominance recording current adjustment, luminance recording current (VR5001) should be closed to observe the chrominance signal.
5. Adjust VR5002 for 35mVp-p ± 2mVp-p as a cyan level of the chrominance signal as shown in Figure E7.
6. Next, adjust VR5001 for 150mVp-p ± 10mVp-p as luminance signal us shown in Figure E8.

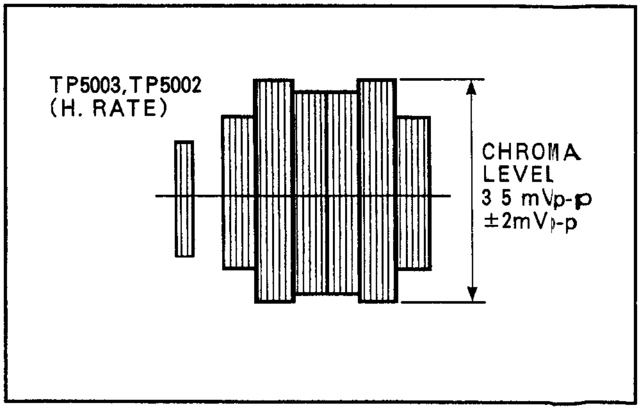


Figure E7

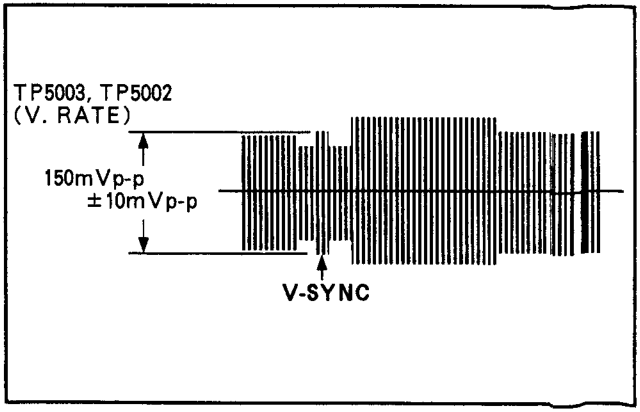


Figure E8

4-3-12. VHS RECORDING CURRENT ADJ.

BOARD	VIDEO 1 C.B.A. / HEAD AMP C.B.A.
TP	TP5003(H)(B-4), TP5002(L)(B-4)
ADJ	VR3008(C-1)
TAPE	BLANK TAPE
INPUT	COLOUR BAR SIGNAL
MODE	REC/PLAY
M.EQ	OSCILLOSCOPE
SPEC	150mVp-p ± 10mVp-p

Note: This adjustment should be always completed after S-VHS Recording Current Adjustment.

[SET UP]

S-VHS SW : OFF
INPUT : LINE

1. Supply the colour bar signal to video input.
2. Connect the oscilloscope to TP5003 (HOT) and TP5002 (GND).
3. Place the unit in recording mode with colour bar signal.
4. Adjust VR3008 for 150mVp-p ± 10mVp-p as a luminance signal as shown in Figure E9.

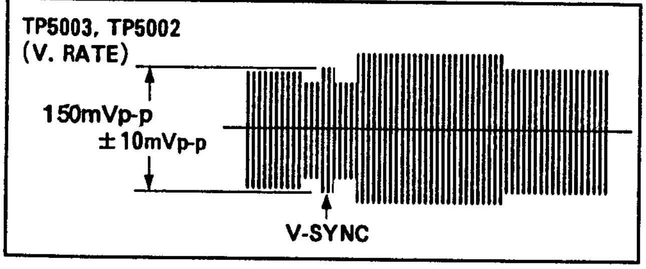


Figure E9

4-3-13. VHS PLAYBACK A/D LEVEL ADJ.

BOARD	VIDEO 1/VIDEO 3
TP	TP8001(D-1)
ADJ	VR3003(C-1)
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	2.4Vp-p ± 0.1Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]

S-VHS SW : OFF
INPUT : LINE
EDIT SW : OFF

1. Supply the colour bar signal to video input.
2. Record the colour bar signal.
3. Connect the oscilloscope to TP8001.
4. Playback the just recorded portion.
5. Adjust VR3003 so that the level is 2.4Vp-p ± 0.1Vp-p as shown in Figure E10.

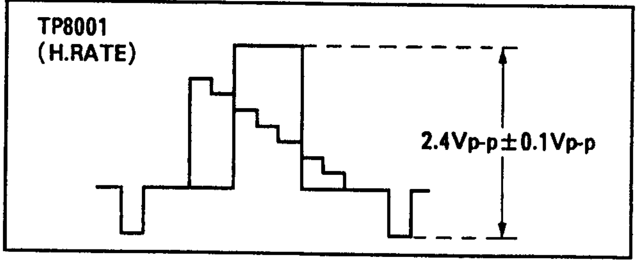


Figure E10

4-3-14. VHS Y PLAYBACK LEVEL ADJ.

BOARD	VIDEO 3 C.B.A.
TP	VIDEO OUT
ADJ	VR8002(D-1)
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	WAVEFORM MONITOR
SPEC	1.0Vp-p ± 0.02Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]

S-VHS SW : OFF
INPUT SW : LINE
EDIT SW : OFF

1. Supply the colour bar signal to video input and recording it for a few minute.
2. Connect the waveform monitor to the video out with a 75Ω termination.
3. Playback the just recorded portion.
4. Adjust VR8002 for 1.0Vp-p ± 0.02Vp-p as a luminance level as shown in Figure E11.

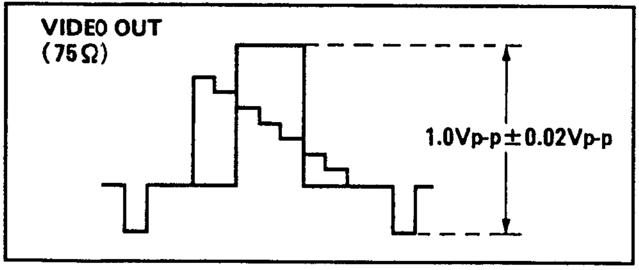


Figure E11

4-3-15. S-VHS SUB EMPHASIS LEVEL ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3002(D-1)
ADJ	VR3004(C-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	400mVp-p ± 10mVp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]

S-VHS SW : ON
EDIT SW : OFF

1. Supply the colour bar signal to video input and record it for a few minute.
2. Playback the just recorded portion.
3. Connect the oscilloscope to TP3002.
4. Adjust VR3004 for 400mVp-p ± 10mVp-p as shown in Figure E12.

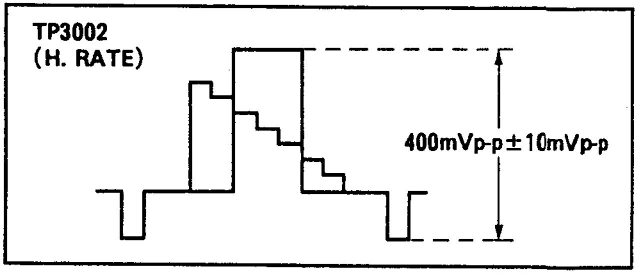


Figure E12

4-3-16. S-VHS PLAYBACK Y LEVEL ADJ.

BOARD	VIDEO 1
TP	VIDEO OUT
ADJ	VR3002(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	1.0Vp-p ± 0.02Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop and VHS playback adjustment.

[SET UP]

S-VHS SW : ON
INPUT SW : LINE
EDIT SW : OFF

1. Supply the colour bar signal to video input and recording it for a few minutes.
2. Connect the oscilloscope to the video out with a 75Ω termination.
3. Playback the just recorded portion.
4. Adjust VR3002 for 1.0Vp-p ± 0.02Vp-p as shown in Figure E13.

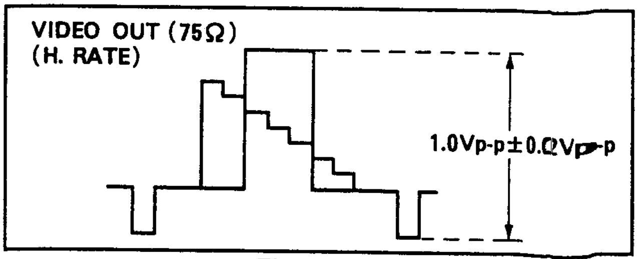


Figure E13

4-3-17. VHS PLAYBACK FREQUENCY RESPONSE ADJ.

BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT
ADJ	VR3009(C-1)
TAPE	SELF RECORDED TAPE
INPUT	SWEEP (WITH OUT BURST)
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	100KHz : 2MHz = 5 : 5.0 ± 1.0

1. Set the sweep generator output as shown in Figure E14.
2. Record the sweep signal.
3. Playback the just recorded portion.
4. Connect the oscilloscope to video out.
5. Adjust VR3009 so that the playback frequency response becomes 5 : 5.0 ± 1.0 at the marker points of 100KHz and 2MHz as shown in Figure E15.
   (Vary the vertical scope setting until the 100KHz level reaches 5 division)

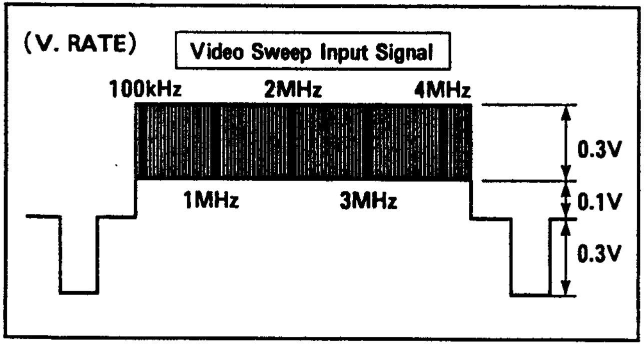

(V. RATE)
Video Sweep Input Signal
100kHz
2MHz
4MHz
1MHz
3MHz
0.3V
0.1V
0.3V

Figure E14

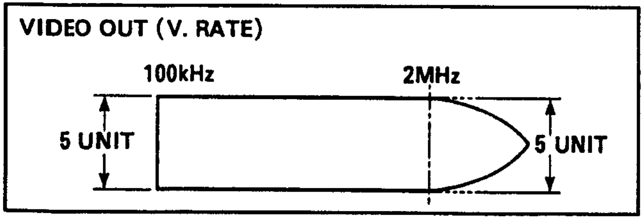

VIDEO OUT (V. RATE)
100kHz
2MHz
5 UNIT
5 UNIT

Figure E15

4-3-18. S-VHS PLAYBACK FREQUENCY RESPONSE

BOARD	VIDEO 1
TP	VIDEO OUT
ADJ	VR3006(C-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	SWEEP (WITHOUT BURST)
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	100KHz : 4MHz = 5 : 4.0 ± 0.5

1. Set the sweep generator output as shown in Figure E16.
2. Record the sweep signal.
3. Playback the just recorded portion.
4. Connect the oscilloscope to video out.
5. Adjust VR3006 so that the playback frequency response becomes 5 : 4.0 ± 0.5 at the marker point of 100KHz and 4MHz as shown in Figure E17.
   (Vary the vertical scope setting until the 100KHz level reaches division)

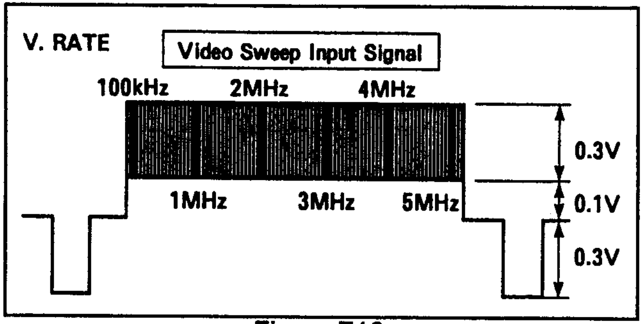

V. RATE
Video Sweep Input Signal
100kHz
2MHz
4MHz
1MHz
3MHz
5MHz
0.3V
0.1V
0.3V

Figure E16

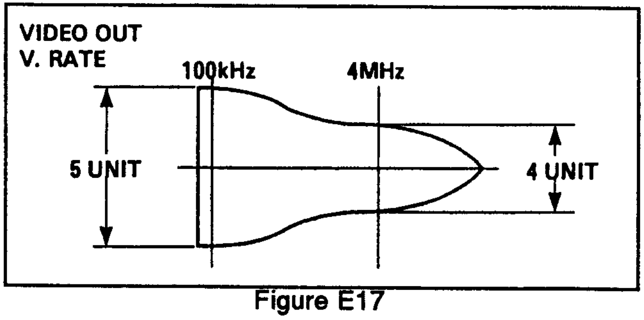

VIDEO OUT
V. RATE
100kHz
4MHz
5 UNIT
4 UNIT

Figure E17

4-3-19. S-VHS SUPER LIMITER ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3003(C-2)
ADJ	VR3007(C-2)
TAPE	
INPUT	SINEWAVE (7MHz 200mVp-p)
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	400mVp-p ± 20mVp-p

Note: Prepare the oscilloscope which is type's more than 100MHz.

[SET UP]
S-VHS ON

1. Set the signal generator (sine-wave) to 7MHz, 200mVp-p and supply it to TP3004.
2. Connect the 100MHz type's oscilloscope to TP3003.
3. Adjust VR3007 so that the level becomes 400mVp-p ± 20mVp-p as show in Figure E18.

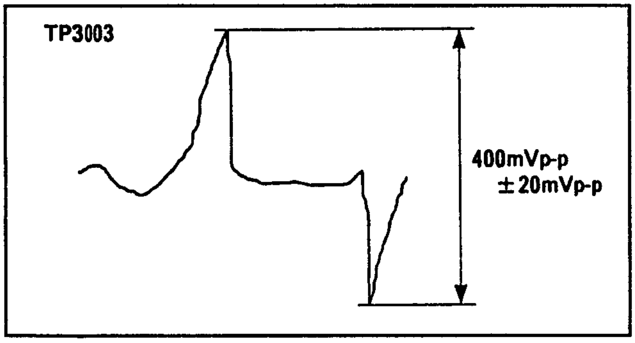


Figure E18

4-3-20. WHITE BALANCE ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3302(D-1), VR3303(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR SIGNAL
MODE	PLAY
M.EQ	VECTORSCOPE
SPEC	REFER TO FIG E19

[SET UP]
S-VHS SW : ON
INPUT SW : LINE

1. Supply the colour bar signal to video input.
2. Record the colour bar signal by S-VHS mode for a few minutes.
3. Connect the vectorscope to video output.
4. Playback the just recorded portion.
5. Adjust VR3302 and VR3303 so that the point "C" becames center as shown in Figure E19.

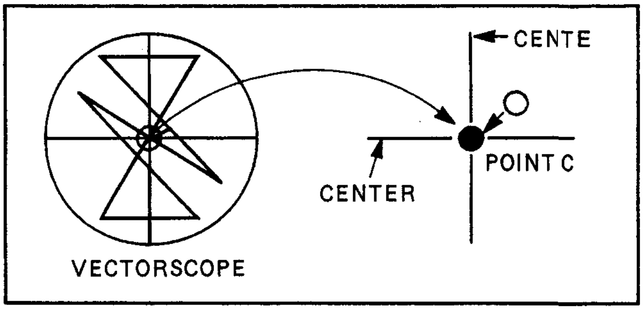


Figure E19

4-3-21. PLAYBACK CHROMA LEVEL ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3304(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOUR BAR
MODE	PLAY
M.EQ	WAVE FORM MONITOR
SPEC	0.65Vp-p ± 0.03Vp-p

[SET UP] S-VHS SW : ON

1. Supply the colour bar signal to video input and record it for a few minute.
2. Connect the waveform monitor to video output with a 75Ω termination.
3. Playback the just recorded portion.
4. Adjust VR3304 so that the cyan level becomes 0.65Vp-p ± 0.03Vp-p as shown in Figure E20.

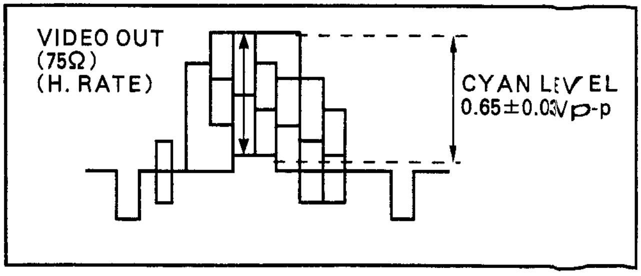


Figure E20

4-3-22. Y/C TIMING ADJ.

BOARD	VIDEO 2
TP	VIDEO OUT
ADJ	VR3301 (D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	SIN2 PULSE & BAR
MODE	PLAY
M.EQ	WAVE FORM MONITOR
SPEC	REFER TO E22

[SET UP]
S-VHS SW : ON
INPUT SW : LINE
EDIT SW : OFF

1. Supply the SIN2 Pulse for signal to video input.
2. Record the colour bar signal by S-VHS mode for a few minuter.
3. Connect the waveform monitor to video output and exrand the "A" portion as shown in Figure E21.
4. Adjust VR3301 so that the waveform becomes as shown in Figure E22.

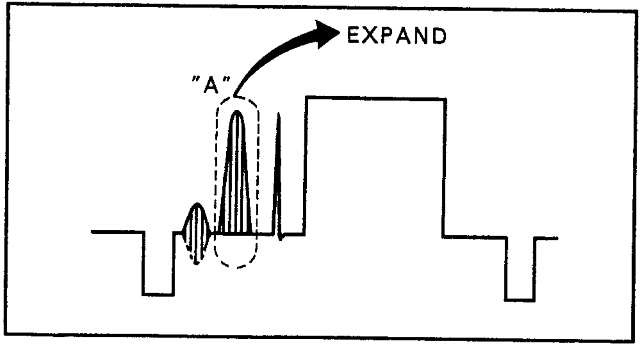


Figure E21

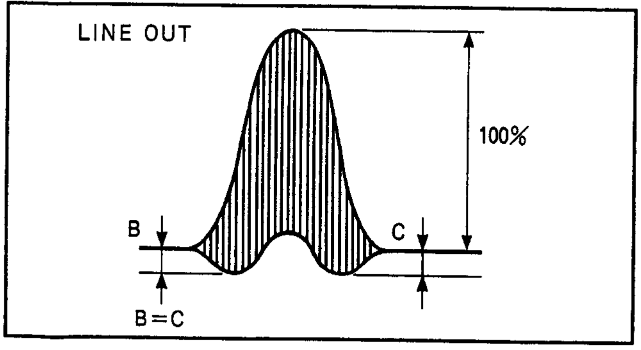


Figure E22

4-3-23. PRE-AMPLIFIER ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT CH1, CH2
ADJ	Hi-Fi CH1: VR4501(C-1), CH2: VR4502(C-1)
TAPE	
INPUT	1KHz, -8dBv SINEWAVE SIGNAL
MODE	STOP
M.EQ	V.T.V.M.
SPEC	Hi-Fi OUTPUT : -8dBv ± 0.2dBv NORM OUTPUT : -8dBv ± 1dBv

1. Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the centre click position.
2. Set the audio output select switch to Hi-Fi mode.
3. Supply 1KHz, -8dBv sinewave signal to audio input.
4. Connect the V.T.V.M. to audio output.
5. Adjust VR4501 (CH1), VR4502 (CH2) so that the levels become -8.0dBv ± 0.2dBv.
6. Set the audio output select switch to NORM mode.
7. Confirm the CH1 and CH2 levels are -8.0dBv ± 1.0dBv.

4-3-24. AUDIO LEVEL METER ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO LEVEL METER
ADJ	CH1 : VR4505(B-3), CH2 : VR4506(B-3)
TAPE	
INPUT	1KHz,-8dBv SINEWAVE SIGNAL
MODE	STOP
M.EQ	
SPEC	Hi-Fi : 0dB, NORM : 0dB

Note: This adjustment should be performed only after completion of 4-3-23.PRE-AMPLIFIER ADJ.

1. Set the audio output select switch to Hi-Fi mode.
2. Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the centre click position.
3. Supply 1KHz, -8dBv sinewave signal to audio inputs (CH1, CH2).
4. Adjust VR4505 (CH1) and VR4506 (CH2) so that the Audio Level Meter shows 0dB as shown in Figure E23.

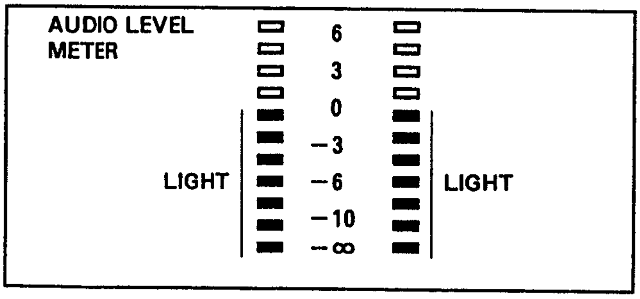


Figure E23

4-3-25. NORMAL AUDIO FREQUENCY RESPONSE ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT (CH1,CH2)
ADJ	CH1: VR4001(B-1), CH2: VR4003(B-1)
TAPE	VFM8180HADH, PORTION : 3
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	400Hz - 5kHz (± 0.5dB)

1. Set the VR4002 and VR4004 to centre position.
2. Set thte Aduio output select switch to NORM.
3. Connect a scope to Audio Outputs (CH1, CH2).
4. Adjust VR4001 (CH1) and VR4003 (CH2) so that the 400Hz and 5KHz levels becomes the same (0 ± 0.5dB) as shown in Figure E24.

Note: After this adjustment is finished, adjust 4-3-26. Normal Audio PB Gain Adj.

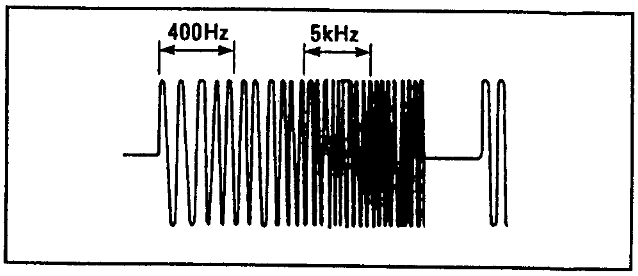


Figure E24

4-3-26. NORMAL AUDIO PLAYBACK GAIN ADJ.

BOARD	AUDIO P.C.B.
TP	CH1, CH2 AUDIO OUTPUT
ADJ	CH1 : VR4002(B-1), CH2 : VR4004(B-1)
TAPE	VFM8180HADH, PORTION: 3
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	300mVp-p ± 15mV

Note: This adjustment should be performed only after completion of 4-3-25. Normal Audio Frequency Responce Adj.

1. Set the audio output select switch to NORM.
2. Connect the a scope to audio outputs (CH1,CH2).
3. Playback the alignment tape (Portion : 3).
4. Adjust VR4002 (CH1) and VR4004 (CH2) so that the levels become 300mVp-p ± 15mV as shown in Figure 25.

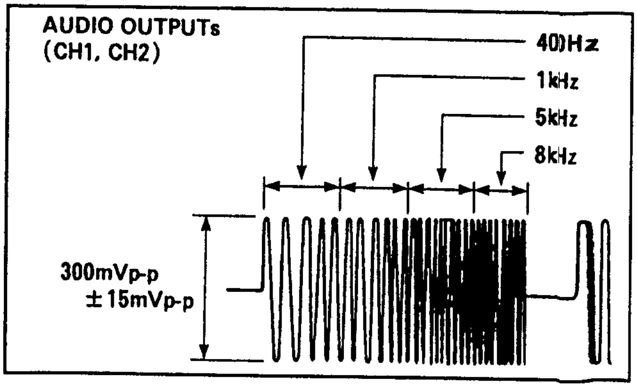


Figure E25

4-3-27. NORMAL AUDIO BIAS CURRENT ADJ.

BOARD	AUDIO C.B.A.
TP	A/C HEAD
ADJ	S-VHS:VR4007(CH1)(A-1),VR4008(CH2)(A-2)
TAPE	S-VHS, VHS BLANK TAPE
INPUT	COLOUR BAR SIGNAL (LINE)
MODE	REC
M.EQ	V.T.V.M.
SPEC	S-VHS CH1: 5.0mVrms ± 0.1mVrms, CH2: 5.0mVrms ± 0.1mVrms VHS CH1: 4.0mVrms ± 0.3mVrms, CH2 4.0mVrms ± 0.3mVrms

1. Supply the colour bar signal to video input.
2. Insert the S-VHS blank tape and place the deck in REC mode.
3. Connect the V.T.V.M. to the A/C head as shown in Figure E26.
4. Adjust VR4007 (CH1), VR4008 (CH2) so that the levels become 5.0mVrms ± 0.1mVrms.
5. Insert the VHS blank tape and place the deck in REC mode.
6. Confirm the CH1 and CH2 levels are 4.0mVrms ± 0.3mVrms.

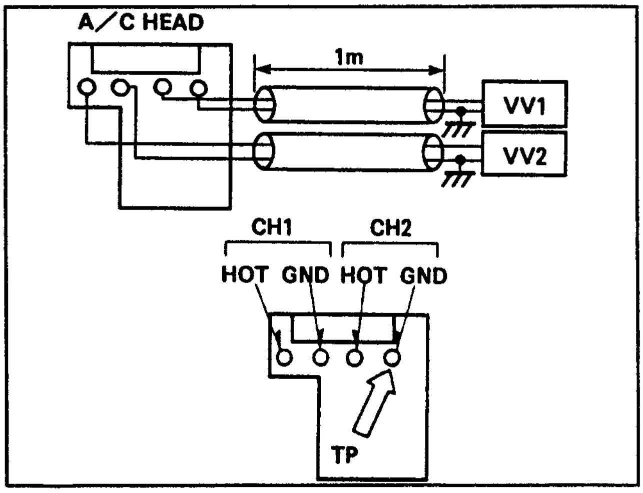


Figure E26

4-3-28. NORMAL AUDIO REC CURRENT ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT (CH1,CH2) TP4005(CH1)(C-1), TP4006(CH2)(B-1)
ADJ	VR4005(CH1)(C-1), VR4006(CH2)(D-1)
TAPE	S-VHS BLANK TAPE
INPUT	1KHz, -8dBv SINEWAVE
MODE	REC
M.EQ	V.T.V.M. (D.V.M.)
SPEC	S-VHS 0 ± 0.5dB, VHS 0 +1.0dB

[SET UP]
S-VHS SW : ON

1. Set the audio output select switch to NORM.
2. Connect the V.T.V.Ms to the deck as shown in Figure E27. Note that only one channel will be adjusted at a time.
3. Supply a 1KHz, -8dBv sine wave signal to the AUDIO INPUT (CH1).
4. Place the deck in the REC mode with S-VHS mode.
5. Adjust VR4005 (CH1) so that V.T.V.M. (2) reads approximetely 0.5Vrms (1.41Vp-p).
6. Playback the recorded portion, and note the amount of difference between V.T.V.M. (1) and (2).
7. Place the deck in the REC mode again, and readjust VR4005 (CH1) slightly, and repeat step 5, nothing the new dirfference.
8. Repeat this "Record/Set/Note to Playback/Note" record and playback readings is minimized (0dBv ± 0.5dBv).
9. Repeat the above procedure again for channel 2, using the other set of test points and VRs.

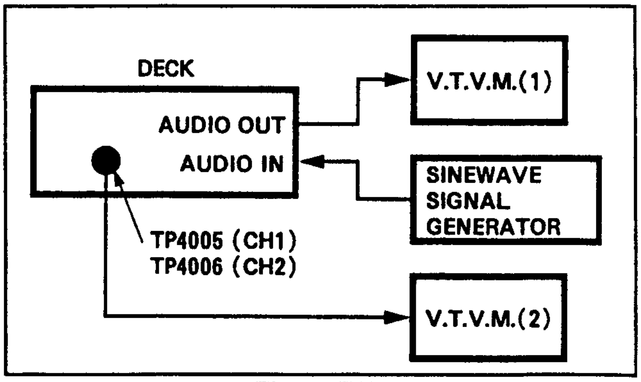


Figure E27

4-3-29. Hi-Fi AUDIO HEAD SWITCHING SHIFTER ADJ.

BOARD	AUDIO C.B.A.
TP	TP4501(C-1), TP4502(C-1)
ADJ	VR4507(D-1)
TAPE	VFM8180HADH PORTION : 2
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	SEE FIGURE E28

1. Connect the oscilloscope to TP4502 (FM H.SW) for CH1 and TP4501 (FM ENV) for CH2.
2. Playback the alignment tape (VFM8180HADH) portion 1.
3. Adjust VR4507 so that there is no drop-out while push the Tracking buttons ("+" or "-") as shown in Figure E28.

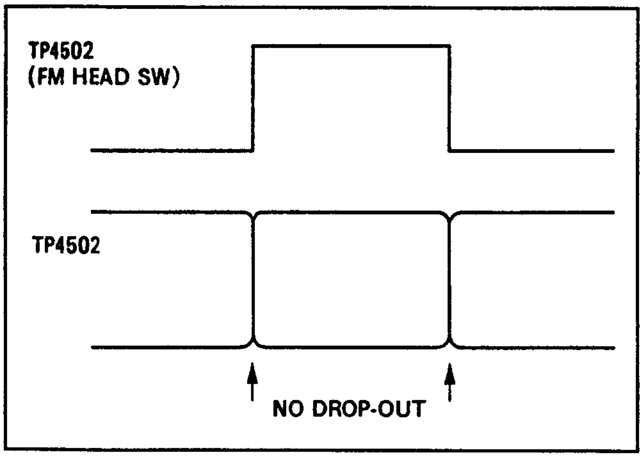


Figure E28

4-3-30. Hi-Fi AUDIO CARRIER FREQUENCY ADJ.

BOARD	FM AUDIO
TP	Pin25(CH1), Pin24(CH2) of FM AUDIO PACK
ADJ	VR4405 (CH1)(F-2), VR4402 (CH2)(E-4)
TAPE	
INPUT	NO SIGNAL
MODE	STOP
M.EQ	FREQUENCY COUNTER
SPEC	1.4MHz±10KHz(CH1), 1.8MHz±10KHz(CH2)

[SET UP]

HI-FI REC : ON (OSD)

1. Ground the Audio Inputs (CH1, CH2).
2. Counect a counter to pin25 of FM Audio Pack.
3. Adjust VR4405 (CH1) so that the frequency becomes 1.4MHz ± 10KHz.
4. Connect a counter to pin24 of FM Audio Pack.
5. Adjust VR4402 (CH2) so that the frequency becomes 1.8MHz ± 10KHz.

4-3-31. Hi-Fi AUDIO DEVIATION ADJ.

BOARD	FM AUDIO
TP	AUDIO OUTPUT (CH1, CH2)
ADJ	VR4407 (CH1)(E-1), VR4401 (CH2)(E-4)
TAPE	SELF RECORDED TAPE
INPUT	1KHz, -8dBv SINEWAVE
MODE	PLAY
M.EQ	V.T.V.M or OSCILLOSCOPE
SPEC	-8dBv ± 0.5dBv

[SET UP]

HI-FI REC : ON
AUDIO OUT : Hi-Fi

1. Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the center click postion.
2. Supply 1KHz, -8dBv sinewave signal to the audio inputs (CH1, CH2).
3. Record it for a few minutes.
4. Playback the recorded portion.
5. Connect a scope to the Audio outputs (CH1, CH2).
6. Adjust VR4407 (CH1) so that the level becomes -8dBv ± 0.5dBv.
7. Adjust VR4401 (CH2) so that the level becomes -8dBv ± 0.5dBv.

4-3-32. Hi-Fi AUDIO REC CURRENT ADJ.

BOARD	AUDIO
TP	TP5001(B-4)
ADJ	VR4503(C-1), VR4504(C-1)
TAPE	S-VHS SELF RECORD TAPE
INPUT	NO SIGNAL
MODE	
M.EQ	OSCILLOSCOPE
SPEC	CH1: 80mVp-p ± 5mVp-p, CH2: 350mVp-p ± 5mVp-p

[SET UP]
HI-FI REC : ON

1. Insert the S-VHS blank tape and place the deck in REC mode.
2. Connect the oscilloscope to TP5001.
3. Turn VR4504 fully counter-clockwise.
4. Adjust VR4503 so that the level becomes 80mVp-p ± 5mVp-p as shown in Figure E29.
5. Adjust VR4504 so that the level become 350mVp-p ± 5mVp-p as shown in Figure E30.

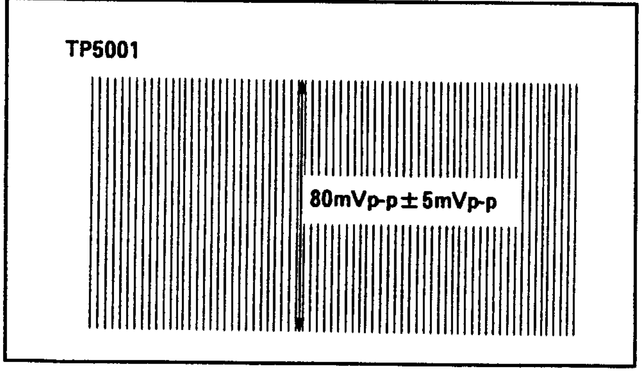


Figure E29

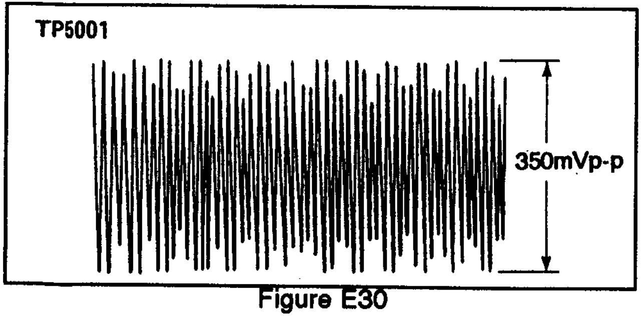


Figure E30

SECTION 5

BLOCK DIAGRAMS

CONTENTS

ABBREVIATION CHART BLK-2, 3

OVERRALL BLOCK DIAGRAM BLK-4

SYSTEM CONTROL BLOCK DIAGRAM BLK-5

SERVO BLOCK DIAGRAM BLK-6

REEL DRIVE BLOCK DIAGRAM BLK-7

FRONT (1 ~ 4) BLOCK DIAGRAM BLK-8

VIDEO (1) BLOCK DIAGRAM BLK-9

VIDEO (2), (3) BLOCK DIAGRAM BLK-10

ABBREVIATION CHART

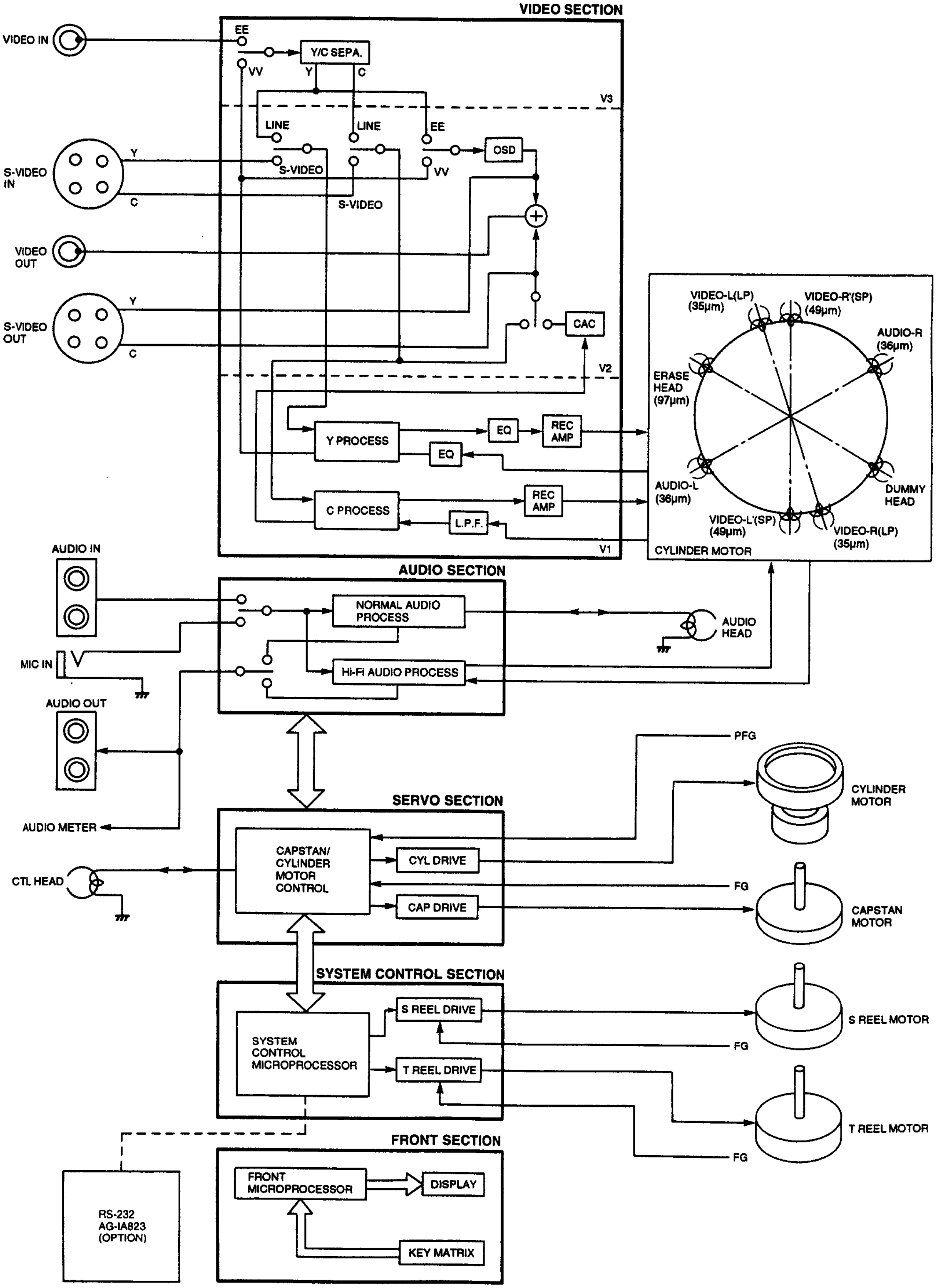
	NAME	SIGNAL
A	A 12V	ANALOG 12V DC
	A 5V	ANALOG 4V DC
	A GND	ANALOG GROUND
	A H SW	ARTIFICAL VERTICAL SYNC SIGNAL
	ART V	ARTIFICAL VERTICAL SYNC SIGNAL
	A. HEAD L	AUDIO HEAD (L)
	A. HEAD C	AUDIO HEAD (C)
	A. HEAD R	AUDIO HEAD (R)
C	CH2 PHONE	HEAD PHONES OUTPUT (CH2)
	CH1 PHONE	HEAD PHONES OUTPUT (CH1)
	CAP VM	CAPSTAN MOTOR VOLTAGE
	CUL	CAPSTAN SPEED CONTROL SIGNAL
	CAP RSF	CAPSTAN MOTOR REVERSE /STOP/FORWARD
	CAP ET	CAPSTAN MOTOR ERROR TORQUE CONTROL
	CAP FG1	CAPSTAN FG1 PULSE
	CAP FG2	CAPSTAN FG2 PULSE
	CYL ET	CYLINDER MOTOR ERROR TORQUE CONTROL
	CYL PFG	CYLINDER PG/FG PULSE
	CAP ON H	CAPSTAN MOTOR ON (H)
	CAP REV H	CAPSTAN REVERSE (H)
	CTL PULSE	CONTROL PULSE
	CAP FG	CAPSTAN FG PULSE
	CH2 AE L	CH2 AUDIO ERASE (L)
	CH1 AE L	CH1 AUDIO ERASE (L)
	CH2 MUTE H	CH2 AUDIO MUTE (H)
	CH2 DREC L	CH2 DELATED FM RECORDING (L)
	CH2 EE L	CH2 AUDIO RECORDING (L)
	CH1 MUTE H	CH1 AUDIO MUTE (H)
	CH1 D REC L	CH1 DELATED FM RECORDING (L)
	CH1 EE L	CH1 AUDIO RECORDING (L)
	CAS SW	CASSETTE SWITCH
	CH2 METER	CH2 METER SIGNAL
	CH1 METER	CH1 METER SIGNAL
	CORR	CORREATION SIGNAL
	COMB Y	COMBINATION LUMINANCE SIGNAL
	COMB C	COMBINATION CHROMINANCE SIGNAL
	CH2 EE H	CH2 AUDIO RECORDING H
	CH1 LINE IN	CH1 AUDIO LINE IN SIGNAL
	CH2 LINE IN	CH2 AUDIO LINE IN SIGNAL
	CH1 PHONE	CH1 PHONE SIGNAL
	CH2 PHONE	CH2 PHONE SIGNAL
	CH1 MUT H	CH1 AUDIO MUTE (H)
	CH2 MUT H	CH2 AUDIO MUTE (H)

	NAME	SIGNAL
	CH2 DREC H	CH2 DELAYED RECORDING (H)
	CH1 AE HEAD	CH1 AUDIO ERASE HEAD
	CH2 AE HEAD	CH2 AUDIO ERASE HEAD
	CH1 LINE OUT	CH1 LINE OUTPUT
	CH2 LINE OUT	CH2 LINE OUTPUT
D	D GND	DIGITAL GROUND
	D 5V	DIGITAL VOLTAGE 5V
	D REC L	DELATED RECORDING (L)
	DEW	DEW
E	ENV SEL	RF ENVELOPE SELECT
	EDIT H	EDIT (H)
	EP L	LP (H)
	EXT SYNC	EXTERNAL SYNC SIGNAL
	EE H	RECORDING (H)
	EE 5V	RECORDING 5V
	EX REC 5V	EXTERNAL RECORDING 5V
	ENVE OUT	RF ENVELOPE SIGNAL OUT
F	FG1	FG1 PULSE
	FG2	FG2 PULSE
	FLY E H	FLYING ERASE (H)
	FSC	FS CLOCK SIGNAL
	FLY E HEAD	FLYING ERASE HEAD
	FLY E GND	FLYING ERASE GND
H	HSS	HORIZONTAL SYNC SIGNAL
	H SW	HEAD SWITCHING PULSE
	HIFI DREC H	DELATED FM RECORDING (H)
	HIFI MUTE H	FM AUDIO MUTE (H)
	HIFI H	FM AUDIO (H)
	HIFI VR REF	FM AUDIO RECORDING LEVEL REFERENCE
	HIFI CH2 VR	CH2 FM AUDIO RECORDING VOLUME
	HIFI CH1 VR	CH1 FM AUDIO RECORDING VOLUME
	HIFI CH2 OUT	CH2 FM AUDIO OUTPUT
	HIFI CH1 OUT	CH1 FM AUDIO OUTPUT
	HIFI PB H	FM AUDIO PLAYBACK (H)
	HIFI D REC (L)	FM DELAYED RECORDING (L)
	HEAD SW	HEAD SW PULSE
	H.A. SW	HEAD AMP SWITCHING PULSE
L	LINE OUT	AUDIO LINE OUT SIGNAL
M	MIC IN H	MICROPHONE SIGNAL
	MIC IN	MICROPHONE SIGNAL INPUT
	M GND	MOTOR GROUND
	MONITER NOR L	NORMAL AUDIO MONITER

ABBREVIATION CHART

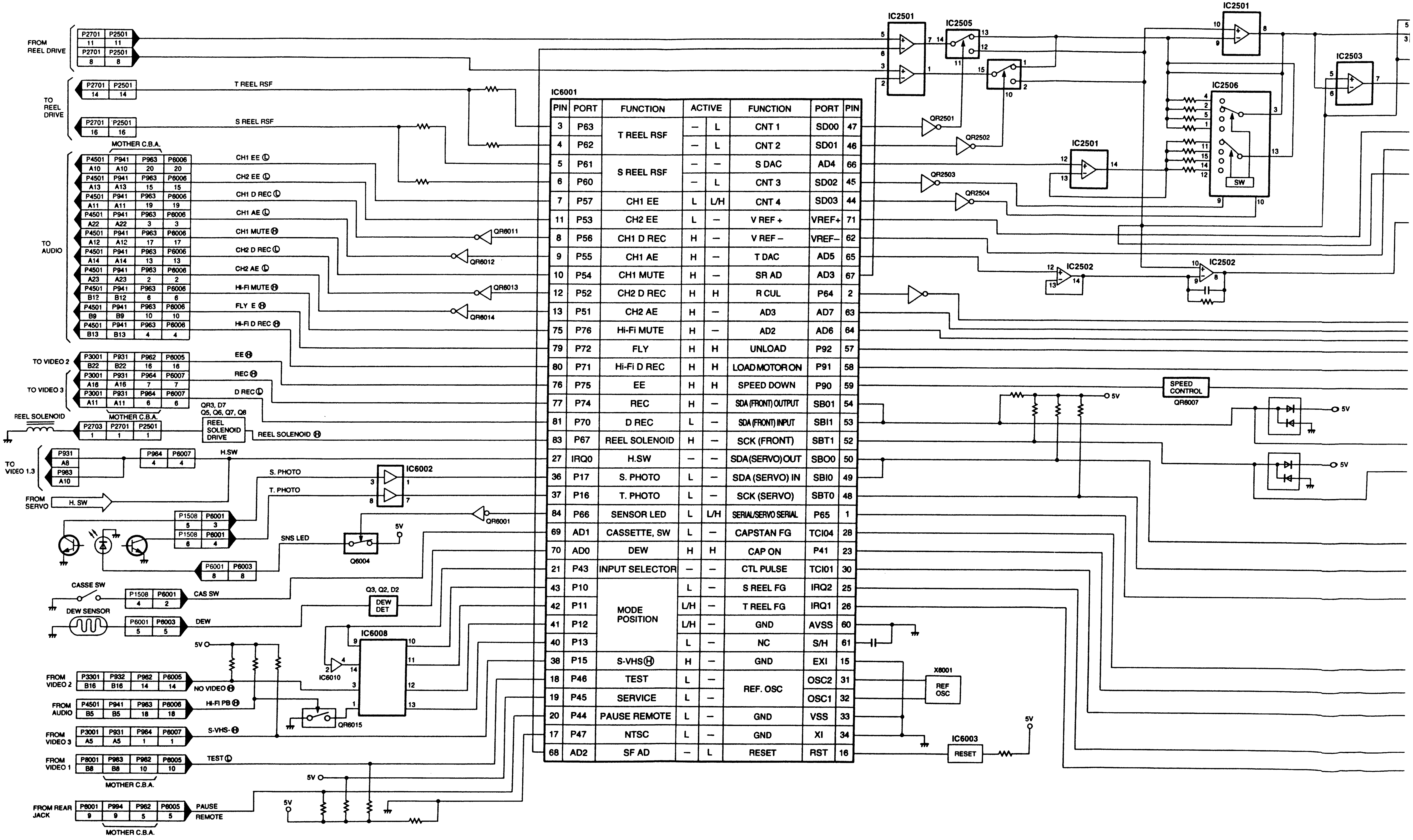
	NAME	SIGNAL
M	MONITOR CH1 H	FM AUDIO MONITER CH1 (H)
	MONITOR CH2 H	FM AUDIO MONITER CH2 (H)
	M 14V	MOTOR VOLTAGE 14V
	M 18V	MOTOR VOLTAGE 18V
	MON OUT	NORMAL AUDIO SIGNAL OUTPUT
	MON NOR L	LCH NORMAL AUDIO SIGNAL
N	NO VIDEO H	NON VIDEO SIGNAL DETECT (H)
	NOR CH1 OUT	CH1 NORMAL AUDIO SIGNAL
	NOR CH2 OUT	CH2 NORMAL AUDIO SIGNAL
	NOR R HEAD	NORMAL R-CH HEAD
	NOR L HEAD	NORMAL L-CH HEAD
P	PB CTL	PLAYBACK CONTROL SIGNAL
	PAUSE REMOTE	PAUSE REMOTE CONTROL SIGNAL
	POS PLAY	MECHANISUM POSITION SWITCH PLAY
	POS EJECT	MECHANISUM POSITION SWITCH EJECT
	POS STOP	MECHANISUM POSITION SWITCH STOP
	POS LOAD	MECHANISUM POSITION SWITCH LOAD
	PICT CTL	PICTURE CONTROL
	PB RF C	PLAYBACK RF CHROMINANCE SIGNAL
	PB EEY	PLAYBACK/RECORDING LUMINANCE SIGNAL
	PB C	PLAYBACK CHROMINANCE SIGNAL
	PLAY 5V	PLAY 5V
R	REEL SOL (H)	REEL SOLENOID ON (H)
	REG +12V	REGULATOR +12V
	ROTARY SW	ROTARY SWITCH
	REC H	RECORDING (H)
	REC C	RECORDING CHROMINANCE SIGNAL
	REC Y	RECORDING LUMINANCE SIGNAL
	REC RFC	RECORDING RF CHROMINANCE SIGNAL
	RE C	RF CHROMINANCE SIGNAL
	RF Y	RF LUMINANCE SIGNAL
	RF OUT	RF SIGNAL OUTPUT
	REC 12V	REC 12V
	REC IN	REC INPUT
	REC OUT	RECORDING OUTPUT
	RF IN	RF SIGNAL INPUT
	REG 5V	REG 5V
S	S REEL VM	SYPPLY REEL DRIVE VOLTAGE
	S REEL FG	SYPPLY REEL FG PULSE
	SR PHOTO	SYPPLY REEL PHOTO TRANSISTOR
	S REEL ET	SYPPLY REEL ERROR TORQUE CONTROL
	S REEL RSF	SYPPLY REEL REVERSE /STOP/FORWARD
	SS	SYNC SIGNAL
	SDA S	SERIAL DATA FOR SERVO
	SCK S	SERIAL CLOCK FOR SERVO
	S CASS L	VHS CASSETTE DETECT (L)
	S-VHS H	SVHS CASSETTE DETECT (H)
	SDA F	SERIAL DATA FOR FRONT
	SCK F	SERIAL CLOCK FOR FRONT
	SES LED	SENSOR LED
	SAFETY TAB (L)	SAFETY TAB SW ON (L)
	SES GND	SENSOR GROUND
T	T REEL VM	TAKE UP REEL DRIVE VOLTAGE
	T REEL FG	TAKE UP REEL FG PULSE
	T REEL RSF	TAKE UP REEL REVERSE /STOP/FORWARD
	TQU	TORQUE CONTROL
	T REEL ET	TAKE UP REEL ERROR TORQUE CONTROL
	TRACK ENV	TRACKING ENVELOPE
	TEST L	TEST (L)
	TRICK L	STILL, SEARCH MODE (L)
	TRICK (H)	STILL, SEARCH MODE (H)
V	V REF	REFERECE VOLTAGE
	VR GND	AUDIO VOLUME GROUND
	2.5V REF	2.5V REFERECE VOLTAGE
	4P C IN	4P CHROMINANCE SIGNAL INPUT
	4P Y IN	4P LUMINANCE SIGNAL INPUT
	4P C OUT	4P CHROMINANCE SIGNAL OUTPUT
	4P Y OUT	4P LUMINANCE SIGNAL OUTPUT
	5V	5V

OVERALL BLOCK DIAGRAM



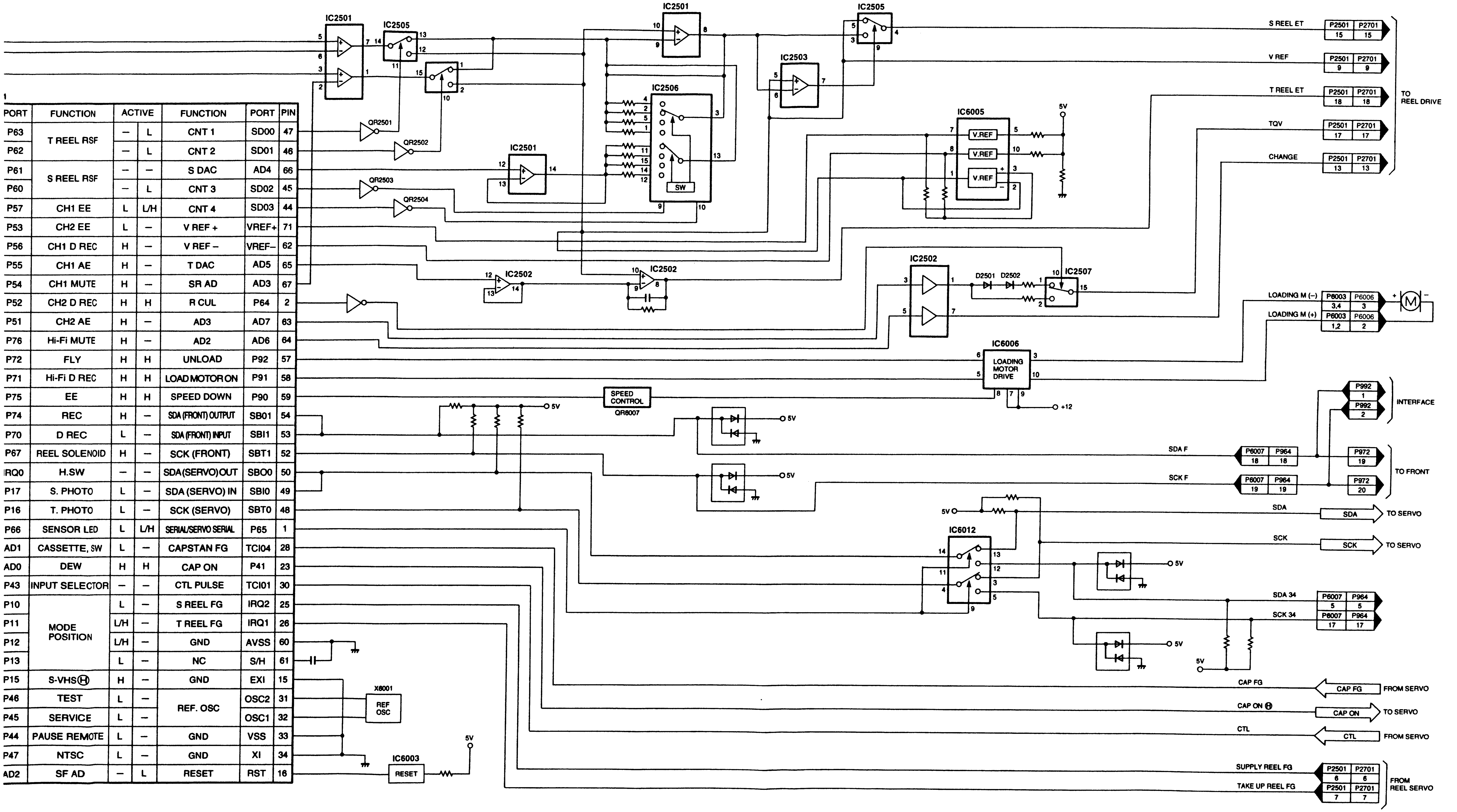
VIDEO SECTION
VIDEO IN
EE
VV
Y/C SEPA.
Y
C
V3
LINE
LINE
EE
S-VIDEO IN
Y
C
S-VIDEO
S-VIDEO
VV
OSD
VIDEO OUT
S-VIDEO OUT
Y
C
CAC
V2
Y PROCESS
EQ
REC AMP
EQ
C PROCESS
REC AMP
L.P.F.
V1
VIDEO-L(LP) (35µm)
VIDEO-R'(SP) (49µm)
AUDIO-R (36µm)
ERASE HEAD (97µm)
AUDIO-L (36µm)
DUMMY HEAD
VIDEO-L'(SP) (49µm)
VIDEO-R(LP) (35µm)
CYLINDER MOTOR
AUDIO IN
AUDIO SECTION
NORMAL AUDIO PROCESS
Hi-Fi AUDIO PROCESS
MIC IN
AUDIO HEAD
AUDIO OUT
AUDIO METER
PFG
CYLINDER MOTOR
SERVO SECTION
CAPSTAN/ CYLINDER MOTOR CONTROL
CYL DRIVE
CAP DRIVE
CTL HEAD
FG
CAPSTAN MOTOR
SYSTEM CONTROL SECTION
SYSTEM CONTROL MICROPROCESSOR
S REEL DRIVE
T REEL DRIVE
S REEL MOTOR
FG
T REEL MOTOR
FG
FRONT SECTION
FRONT MICROPROCESSOR
DISPLAY
KEY MATRIX
RS-232 AG-IA823 (OPTION)

SYSTEM CONTROL BLOCK DIAGRAM


FROM REEL DRIVE
P2701 P2501 11 11
P2701 P2501 8 8
TO REEL DRIVE
P2701 P2501 14 14
T REEL RSF
P2701 P2501 16 16
S REEL RSF
MOTHER C.B.A.
TO AUDIO
P4501 P941 P963 P6006 A10 A10 20 20
CH1 EE Ⓛ
P4501 P941 P963 P6006 A13 A13 15 15
CH2 EE Ⓛ
P4501 P941 P963 P6006 A11 A11 19 19
CH1 D REC Ⓛ
P4501 P941 P963 P6006 A22 A22 3 3
CH1 AE Ⓛ
P4501 P941 P963 P6006 A12 A12 17 17
CH1 MUTE Ⓗ
P4501 P941 P963 P6006 A14 A14 13 13
CH2 D REC Ⓛ
P4501 P941 P963 P6006 A23 A23 2 2
CH2 AE Ⓛ
P4501 P941 P963 P6006 B12 B12 6 6
HI-FI MUTE Ⓗ
P4501 P941 P963 P6006 B9 B9 10 10
FLY E Ⓗ
P4501 P941 P963 P6006 B13 B13 4 4
HI-FI D REC Ⓗ
QR6011
QR6012
QR6013
QR6014
TO VIDEO 2
P3001 P931 P962 P6005 B22 B22 16 16
EE Ⓗ
TO VIDEO 3
P3001 P931 P964 P6007 A16 A16 7 7
REC Ⓗ
P3001 P931 P964 P6007 A11 A11 6 6
D REC Ⓛ
MOTHER C.B.A.
REEL SOLENOID
P2703 P2701 P2501 1 1 1
QR3, D7
Q5, Q6, Q7, Q8
REEL SOLENOID DRIVE
REEL SOLENOID Ⓗ
TO VIDEO 1.3
P931 A8
P963 A10
P964 P6007 4 4
H.SW
FROM SERVO
H. SW
S. PHOTO
T. PHOTO
IC6002
P1508 P6001 5 3
P1508 P6001 6 4
QR6001
SNS LED
5V
Q6004
P6001 P6003 8 8
CASSE SW
P1508 P6001 4 2
CAS SW
Q3, Q2, D2
DEW DET
DEW SENSOR
P6001 P6003 5 5
DEW
5V
IC6008
IC6010
FROM VIDEO 2
P3301 P932 P962 P6005 B16 B16 14 14
NO VIDEO Ⓗ
FROM AUDIO
P4501 P941 P963 P6006 B5 B5 18 18
HI-FI PB Ⓗ
QR6015
FROM VIDEO 3
P3001 P931 P964 P6007 A5 A5 1 1
S-VHS- Ⓗ
FROM VIDEO 1
P8001 P983 P962 P6005 B8 B8 10 10
TEST Ⓛ
MOTHER C.B.A.
5V
FROM REAR JACK
P6001 P994 P962 P6005 9 9 5 5
PAUSE REMOTE
MOTHER C.B.A.
IC6001
IC2501
IC2505
IC2503
IC2506
SW
QR2501
QR2502
QR2503
QR2504
IC2501
IC2502
IC2502
SPEED CONTROL
QR6007
5V
5V
5V
X6001
REF OSC
IC6003
RESET
5V

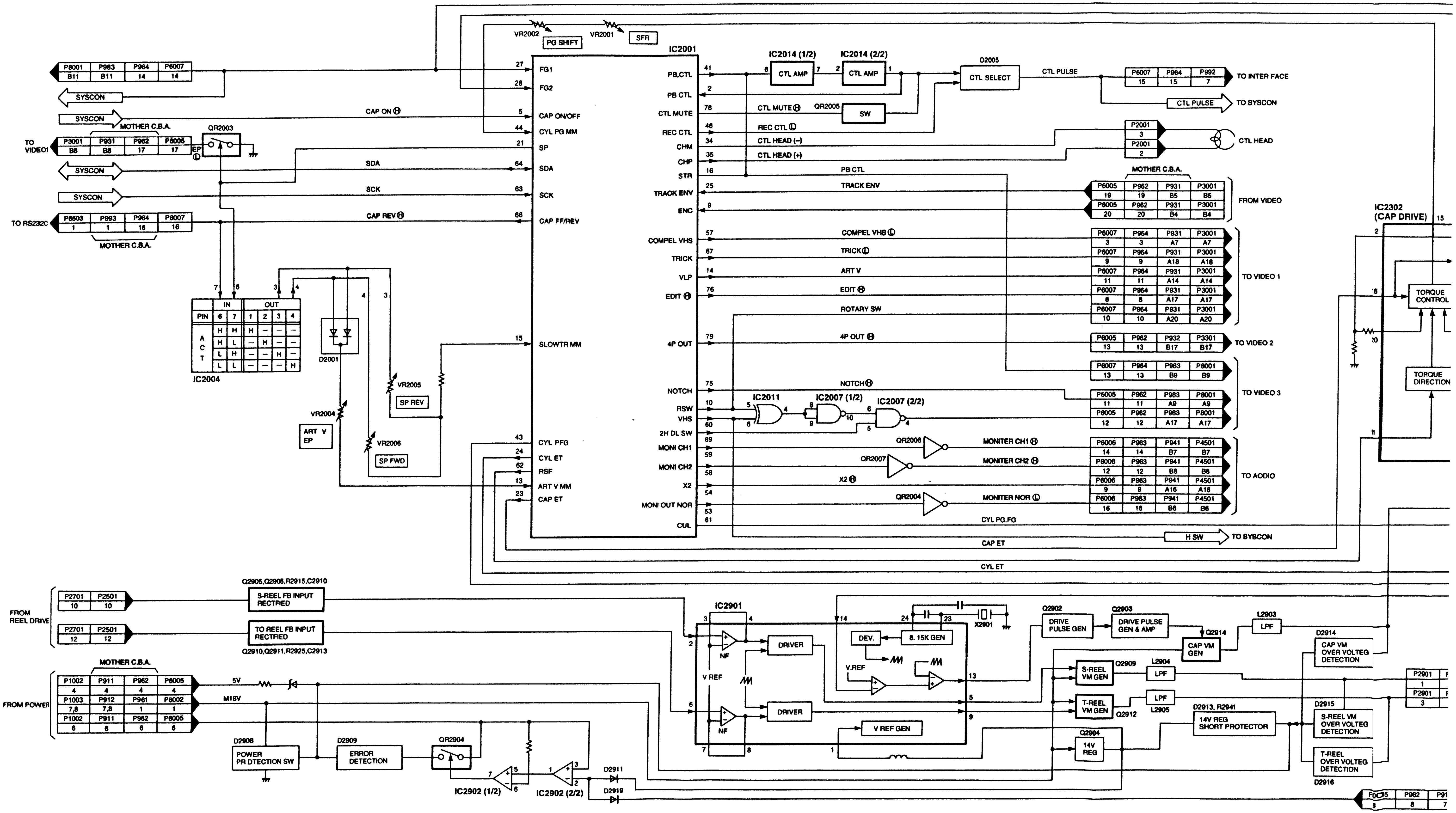
IC6001

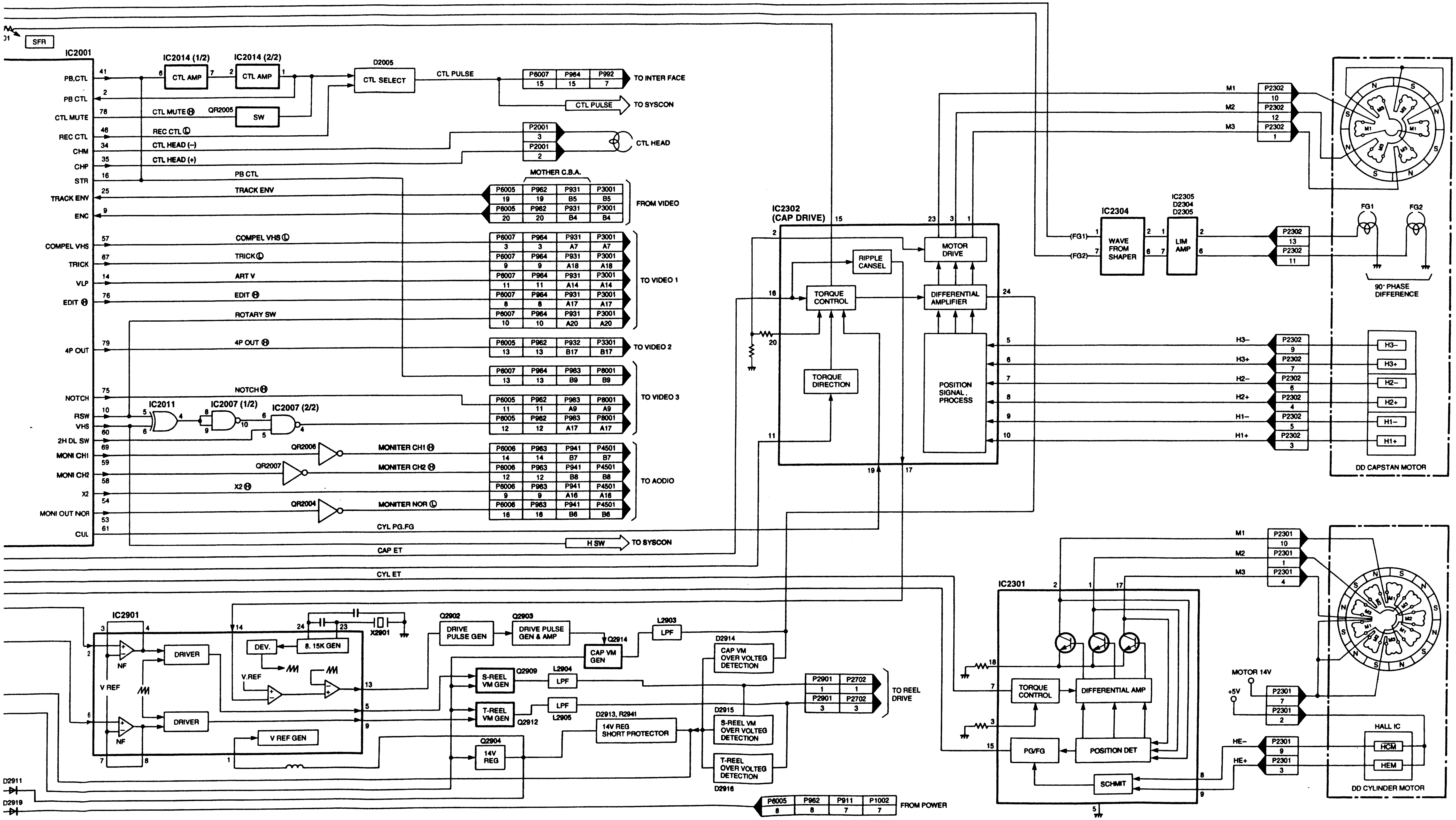
PIN	PORT	FUNCTION	ACTIVE		FUNCTION	PORT	PIN
3	P63	T REEL RSF	–	L	CNT 1	SD00	47
4	P62		–	L	CNT 2	SD01	46
5	P61	S REEL RSF	–	–	S DAC	AD4	66
6	P60		–	L	CNT 3	SD02	45
7	P57	CH1 EE	L	L/H	CNT 4	SD03	44
11	P53	CH2 EE	L	–	V REF +	VREF+	71
8	P56	CH1 D REC	H	–	V REF –	VREF–	62
9	P55	CH1 AE	H	–	T DAC	AD5	65
10	P54	CH1 MUTE	H	–	SR AD	AD3	67
12	P52	CH2 D REC	H	H	R CUL	P64	2
13	P51	CH2 AE	H	–	AD3	AD7	63
75	P76	Hi-Fi MUTE	H	–	AD2	AD6	64
79	P72	FLY	H	H	UNLOAD	P92	57
80	P71	Hi-Fi D REC	H	H	LOAD MOTOR ON	P91	58
76	P75	EE	H	H	SPEED DOWN	P90	59
77	P74	REC	H	–	SDA (FRONT) OUTPUT	SB01	54
81	P70	D REC	L	–	SDA (FRONT) INPUT	SBI1	53
83	P67	REEL SOLENOID	H	–	SCK (FRONT)	SBT1	52
27	IRQ0	H.SW	–	–	SDA(SERVO)OUT	SBO0	50
36	P17	S. PHOTO	L	–	SDA (SERVO) IN	SBI0	49
37	P16	T. PHOTO	L	–	SCK (SERVO)	SBT0	48
84	P66	SENSOR LED	L	L/H	SERIAL/SERVO SERIAL	P65	1
69	AD1	CASSETTE, SW	L	–	CAPSTAN FG	TCI04	28
70	AD0	DEW	H	H	CAP ON	P41	23
21	P43	INPUT SELECTOR	–	–	CTL PULSE	TCI01	30
43	P10	MODE POSITION	L	–	S REEL FG	IRQ2	25
42	P11		L/H	–	T REEL FG	IRQ1	26
41	P12		L/H	–	GND	AVSS	60
40	P13		L	–	NC	S/H	61
38	P15	S-VHS Ⓗ	H	–	GND	EXI	15
18	P46	TEST	L	–	REF. OSC	OSC2	31
19	P45	SERVICE	L	–		OSC1	32
20	P44	PAUSE REMOTE	L	–	GND	VSS	33
17	P47	NTSC	L	–	GND	XI	34
68	AD2	SF AD	–	L	RESET	RST	16


1
IC2501
IC2505
IC2503
IC2506
IC2502
IC6005
IC2507
IC6006
IC6012
IC6003
X6001
QR2501
QR2502
QR2503
QR2504
QR6007
V.REF
SW
D2501
D2502
LOADING MOTOR DRIVE
SPEED CONTROL
REF OSC
RESET
5V
+12
M
S REEL ET
V REF
T REEL ET
TQV
CHANGE
P2501 P2701
TO REEL DRIVE
LOADING M (–)
LOADING M (+)
P6003 P6006
P992
INTERFACE
SDA F
SCK F
P6007 P964
P972
TO FRONT
SDA
SCK
TO SERVO
SDA 34
SCK 34
CAP FG
FROM SERVO
CAP ON
CTL
SUPPLY REEL FG
TAKE UP REEL FG
FROM REEL SERVO

PORT	FUNCTION	ACTIVE		FUNCTION	PORT	PIN
P63	T REEL RSF	–	L	CNT 1	SD00	47
P62		–	L	CNT 2	SD01	46
P61	S REEL RSF	–	–	S DAC	AD4	66
P60		–	L	CNT 3	SD02	45
P57	CH1 EE	L	L/H	CNT 4	SD03	44
P53	CH2 EE	L	–	V REF +	VREF+	71
P56	CH1 D REC	H	–	V REF –	VREF–	62
P55	CH1 AE	H	–	T DAC	AD5	65
P54	CH1 MUTE	H	–	SR AD	AD3	67
P52	CH2 D REC	H	H	R CUL	P64	2
P51	CH2 AE	H	–	AD3	AD7	63
P76	Hi-Fi MUTE	H	–	AD2	AD6	64
P72	FLY	H	H	UNLOAD	P92	57
P71	Hi-Fi D REC	H	H	LOAD MOTOR ON	P91	58
P75	EE	H	H	SPEED DOWN	P90	59
P74	REC	H	–	SDA (FRONT) OUTPUT	SB01	54
P70	D REC	L	–	SDA (FRONT) INPUT	SBI1	53
P67	REEL SOLENOID	H	–	SCK (FRONT)	SBT1	52
IRQ0	H.SW	–	–	SDA(SERVO)OUT	SBO0	50
P17	S. PHOTO	L	–	SDA (SERVO) IN	SBI0	49
P16	T. PHOTO	L	–	SCK (SERVO)	SBT0	48
P66	SENSOR LED	L	L/H	SERIAL/SERVO SERIAL	P65	1
AD1	CASSETTE, SW	L	–	CAPSTAN FG	TCI04	28
AD0	DEW	H	H	CAP ON	P41	23
P43	INPUT SELECTOR	–	–	CTL PULSE	TCI01	30
P10	MODE POSITION	L	–	S REEL FG	IRQ2	25
P11		L/H	–	T REEL FG	IRQ1	26
P12		L/H	–	GND	AVSS	60
P13		L	–	NC	S/H	61
P15	S-VHSⒽ	H	–	GND	EXI	15
P46	TEST	L	–	REF. OSC	OSC2	31
P45	SERVICE	L	–		OSC1	32
P44	PAUSE REMOTE	L	–	GND	VSS	33
P47	NTSC	L	–	GND	XI	34
AD2	SF AD	–	L	RESET	RST	16

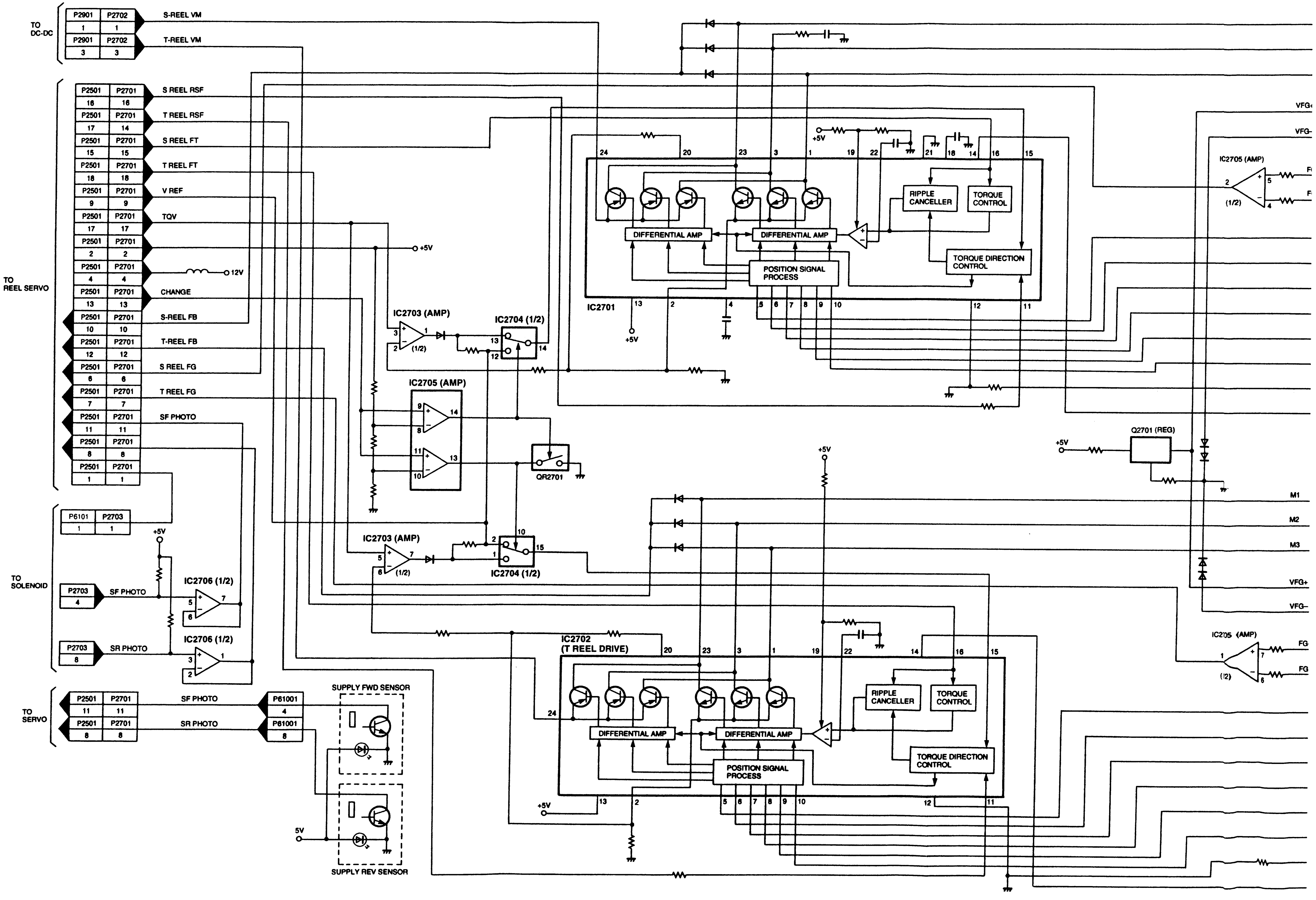
SERVO BLOCK DIAGRAM

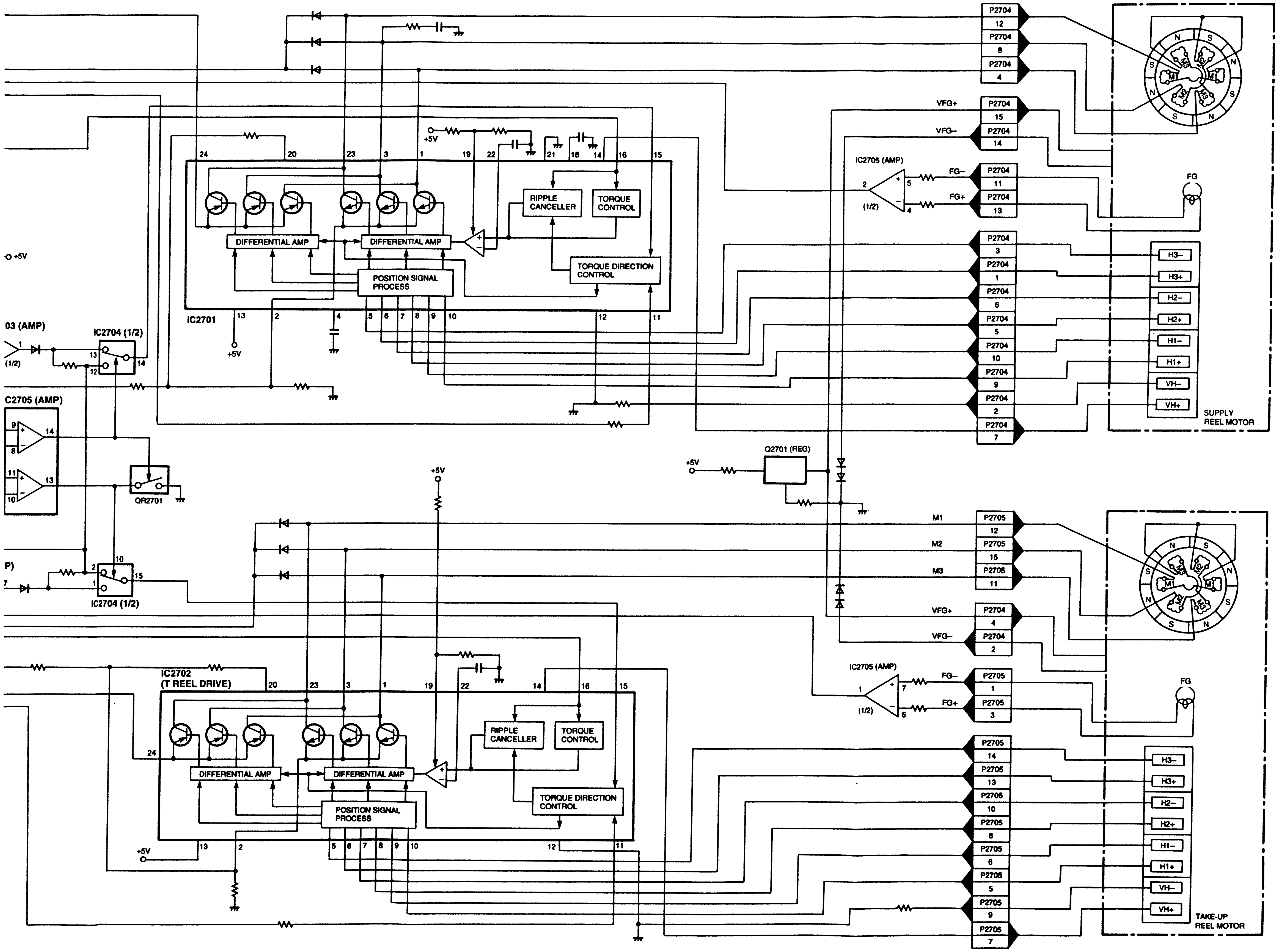

IC2001
FG1
FG2
CAP ON/OFF
CYL PG MM
SP
SDA
SCK
CAP FF/REV
SLOWTR MM
CYL PFG
CYL ET
RSF
ART V MM
CAP ET
PB CTL
CTL MUTE
REC CTL
CHM
CHP
STR
TRACK ENV
ENC
COMPEL VHS
TRICK
VLP
EDIT
4P OUT
NOTCH
RSW
VHS
2H DL SW
MONI CH1
MONI CH2
X2
MONI OUT NOR
CUL
VR2002
PG SHIFT
VR2001
SFR
IC2014 (1/2)
IC2014 (2/2)
CTL AMP
D2005
CTL SELECT
CTL PULSE
TO INTER FACE
TO SYSCON
QR2005
SW
CTL MUTE
REC CTL
CTL HEAD (–)
CTL HEAD (+)
CTL HEAD
P2001
MOTHER C.B.A.
FROM VIDEO
TO VIDEO 1
TO VIDEO 2
TO VIDEO 3
TO AODIO
COMPEL VHS
TRICK
ART V
EDIT
ROTARY SW
4P OUT
NOTCH
IC2011
IC2007 (1/2)
IC2007 (2/2)
QR2006
QR2007
QR2004
MONITER CH1
MONITER CH2
MONITER NOR
CYL PG.FG
H SW
CAP ET
CYL ET
SYSCON
CAP ON
TO VIDEO1
QR2003
TO RS232C
CAP REV
IC2004
PIN
IN
OUT
ACT
D2001
VR2004
ART V EP
VR2005
SP REV
VR2006
SP FWD
IC2302 (CAP DRIVE)
TORQUE CONTROL
TORQUE DIRECTION
FROM REEL DRIVE
Q2905,Q2906,R2915,C2910
S-REEL FB INPUT RECTFIED
TO REEL FB INPUT RECTFIED
Q2910,Q2911,R2925,C2913
FROM POWER
5V
M18V
D2908
POWER PR DTECTION SW
D2909
ERROR DETECTION
QR2904
IC2902 (1/2)
IC2902 (2/2)
D2911
D2919
IC2901
V REF
NF
DRIVER
DEV.
8. 15K GEN
X2901
V.REF
V REF GEN
Q2902
DRIVE PULSE GEN
Q2903
DRIVE PULSE GEN & AMP
Q2914
CAP VM GEN
L2903
LPF
S-REEL VM GEN
Q2909
L2904
T-REEL VM GEN
Q2912
L2905
Q2904
14V REG
D2913, R2941
14V REG SHORT PROTECTOR
D2914
CAP VM OVER VOLTEG DETECTION
D2915
S-REEL VM OVER VOLTEG DETECTION
T-REEL OVER VOLTEG DETECTION
D2916
P2901



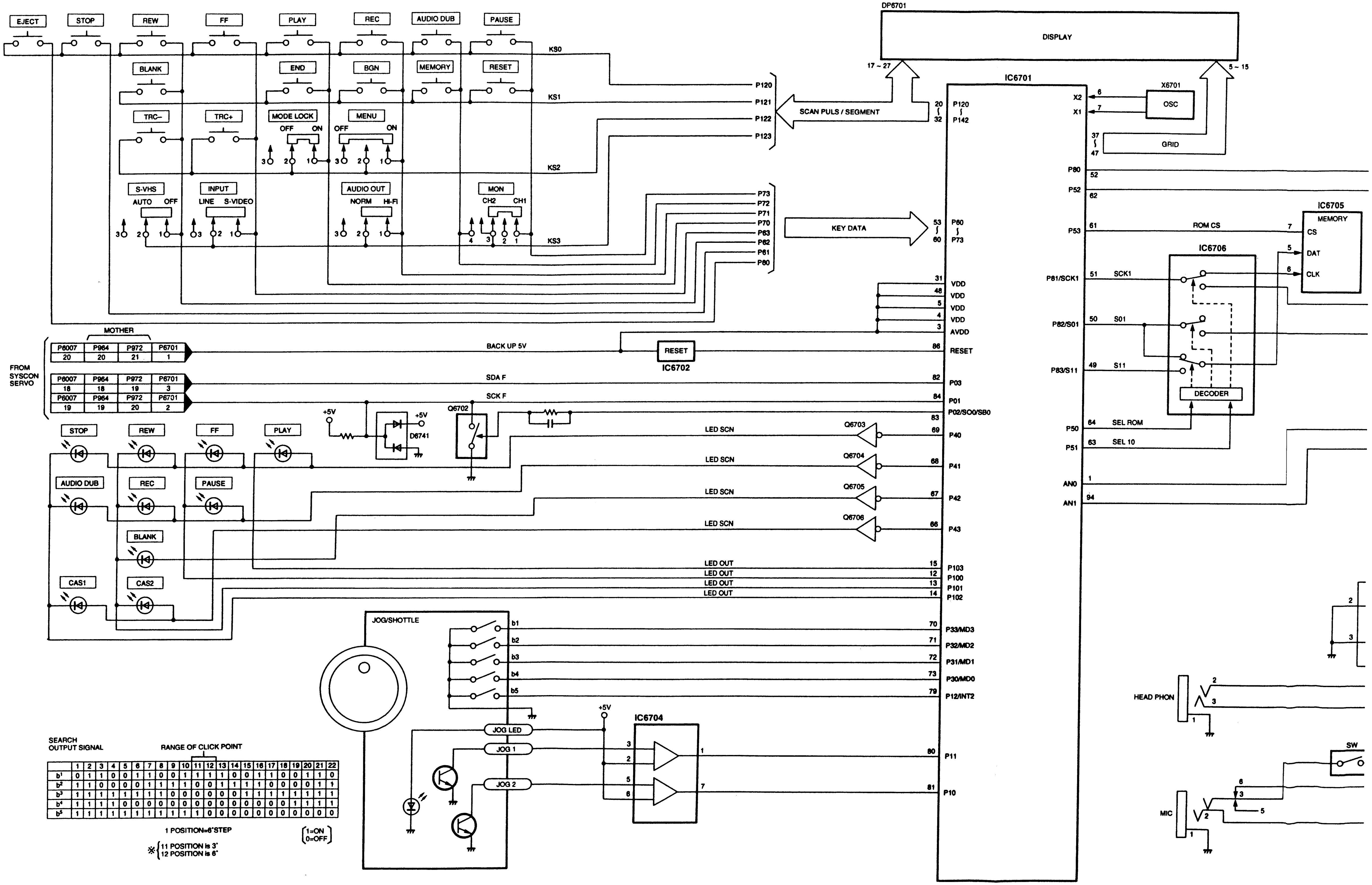
SFR
IC2001
PB.CTL
PB CTL
CTL MUTE
REC CTL
CHM
CHP
STR
TRACK ENV
ENC
COMPEL VHS
TRICK
VLP
EDIT
4P OUT
NOTCH
RSW
VHS
2H DL SW
MONI CH1
MONI CH2
X2
MONI OUT NOR
CUL
IC2014 (1/2)
CTL AMP
IC2014 (2/2)
CTL AMP
D2005
CTL SELECT
CTL PULSE
TO INTER FACE
CTL PULSE
TO SYSCON
CTL MUTE
QR2005
SW
REC CTL
CTL HEAD (–)
CTL HEAD (+)
CTL HEAD
PB CTL
MOTHER C.B.A.
TRACK ENV
FROM VIDEO
COMPEL VHS
TRICK
ART V
EDIT
ROTARY SW
TO VIDEO 1
4P OUT
TO VIDEO 2
NOTCH
TO VIDEO 3
IC2011
IC2007 (1/2)
IC2007 (2/2)
QR2006
MONITER CH1
QR2007
MONITER CH2
X2
QR2004
MONITER NOR
TO AODIO
CYL PG.FG
H SW
TO SYSCON
CAP ET
CYL ET
IC2302
(CAP DRIVE)
RIPPLE CANSEL
MOTOR DRIVE
TORQUE CONTROL
DIFFERENTIAL AMPLIFIER
TORQUE DIRECTION
POSITION SIGNAL PROCESS
IC2304
WAVE FROM SHAPER
IC2305
D2304
D2305
LIM AMP
(FG1)
(FG2)
FG1
FG2
90° PHASE DIFFERENCE
M1
M2
M3
H3–
H3+
H2–
H2+
H1–
H1+
DD CAPSTAN MOTOR
IC2901
V REF
NF
DRIVER
DEV.
8. 15K GEN
X2901
V.REF
V REF GEN
Q2902
DRIVE PULSE GEN
Q2903
DRIVE PULSE GEN & AMP
Q2914
CAP VM GEN
L2903
LPF
D2914
CAP VM OVER VOLTEG DETECTION
S-REEL VM GEN
Q2909
L2904
LPF
T-REEL VM GEN
Q2912
LPF
L2905
D2913, R2941
14V REG SHORT PROTECTOR
D2915
S-REEL VM OVER VOLTEG DETECTION
T-REEL OVER VOLTEG DETECTION
D2916
Q2904
14V REG
TO REEL DRIVE
D2911
D2919
FROM POWER
IC2301
TORQUE CONTROL
DIFFERENTIAL AMP
PG/FG
POSITION DET
SCHMIT
MOTOR 14V
+5V
HALL IC
HCM
HEM
HE–
HE+
DD CYLINDER MOTOR
N
S

REEL DRIVE BLOCK DIAGRAM


TO DC-DC
P2901
P2702
S-REEL VM
T-REEL VM
TO REEL SERVO
P2501
P2701
S REEL RSF
T REEL RSF
S REEL FT
T REEL FT
V REF
TQV
+5V
12V
CHANGE
S-REEL FB
T-REEL FB
S REEL FG
T REEL FG
SF PHOTO
P6101
P2703
TO SOLENOID
SF PHOTO
SR PHOTO
IC2706 (1/2)
IC2703 (AMP)
(1/2)
IC2704 (1/2)
IC2705 (AMP)
QR2701
IC2701
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
RIPPLE CANCELLER
TORQUE CONTROL
TORQUE DIRECTION CONTROL
IC2705 (AMP)
VFG+
VFG-
Q2701 (REG)
M1
M2
M3
IC2702 (T REEL DRIVE)
TO SERVO
P61001
SUPPLY FWD SENSOR
SUPPLY REV SENSOR
5V
FG


IC2701
DIFFERENTIAL AMP
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
RIPPLE CANCELLER
TORQUE CONTROL
TORQUE DIRECTION CONTROL
+5V
IC2705 (AMP)
(1/2)
FG–
FG+
VFG+
VFG–
P2704
SUPPLY REEL MOTOR
FG
H3–
H3+
H2–
H2+
H1–
H1+
VH–
VH+
N
S
M1
M2
M3
03 (AMP)
IC2704 (1/2)
C2705 (AMP)
QR2701
Q2701 (REG)
M1
M2
M3
P2705
IC2702 (T REEL DRIVE)
TAKE-UP REEL MOTOR

FRONT (1-4) BLOCK DIAGRAM


EJECT
STOP
REW
FF
PLAY
REC
AUDIO DUB
PAUSE
KS0
BLANK
END
BGN
MEMORY
RESET
KS1
TRC-
TRC+
MODE LOCK
OFF ON
MENU
OFF ON
KS2
S-VHS
AUTO OFF
INPUT
LINE S-VIDEO
AUDIO OUT
NORM HI-FI
MON
CH2 CH1
KS3
P120
P121
P122
P123
P73
P72
P71
P70
P63
P62
P61
P60
SCAN PULS / SEGMENT
KEY DATA
DP6701
DISPLAY
17 ~ 27
5 ~ 15
IC6701
P120 ∫ P142
P60 ∫ P73
X6701
OSC
X2
X1
GRID
P80
P52
P53
ROM CS
IC6705
MEMORY
CS
DAT
CLK
IC6706
P81/SCK1
SCK1
P82/S01
S01
P83/S11
S11
DECODER
P50
SEL ROM
P51
SEL 10
AN0
AN1
VDD
VDD
VDD
VDD
AVDD
RESET
P03
P01
P02/SO0/SB0
P40
P41
P42
P43
P103
P100
P101
P102
P33/MD3
P32/MD2
P31/MD1
P30/MD0
P12/INT2
P11
P10
MOTHER
FROM SYSCON SERVO
P6007 P964 P972 P6701
20 20 21 1
P6007 P964 P972 P6701
18 18 19 3
P6007 P964 P972 P6701
19 19 20 2
BACK UP 5V
RESET
IC6702
SDA F
SCK F
+5V
+5V
D6741
Q6702
LED SCN
LED SCN
LED SCN
LED SCN
Q6703
Q6704
Q6705
Q6706
LED OUT
LED OUT
LED OUT
LED OUT
STOP
REW
FF
PLAY
AUDIO DUB
REC
PAUSE
BLANK
CAS1
CAS2
JOG/SHOTTLE
b1
b2
b3
b4
b5
JOG LED
JOG 1
JOG 2
+5V
IC6704
HEAD PHON
MIC
SW

SEARCH
OUTPUT SIGNAL

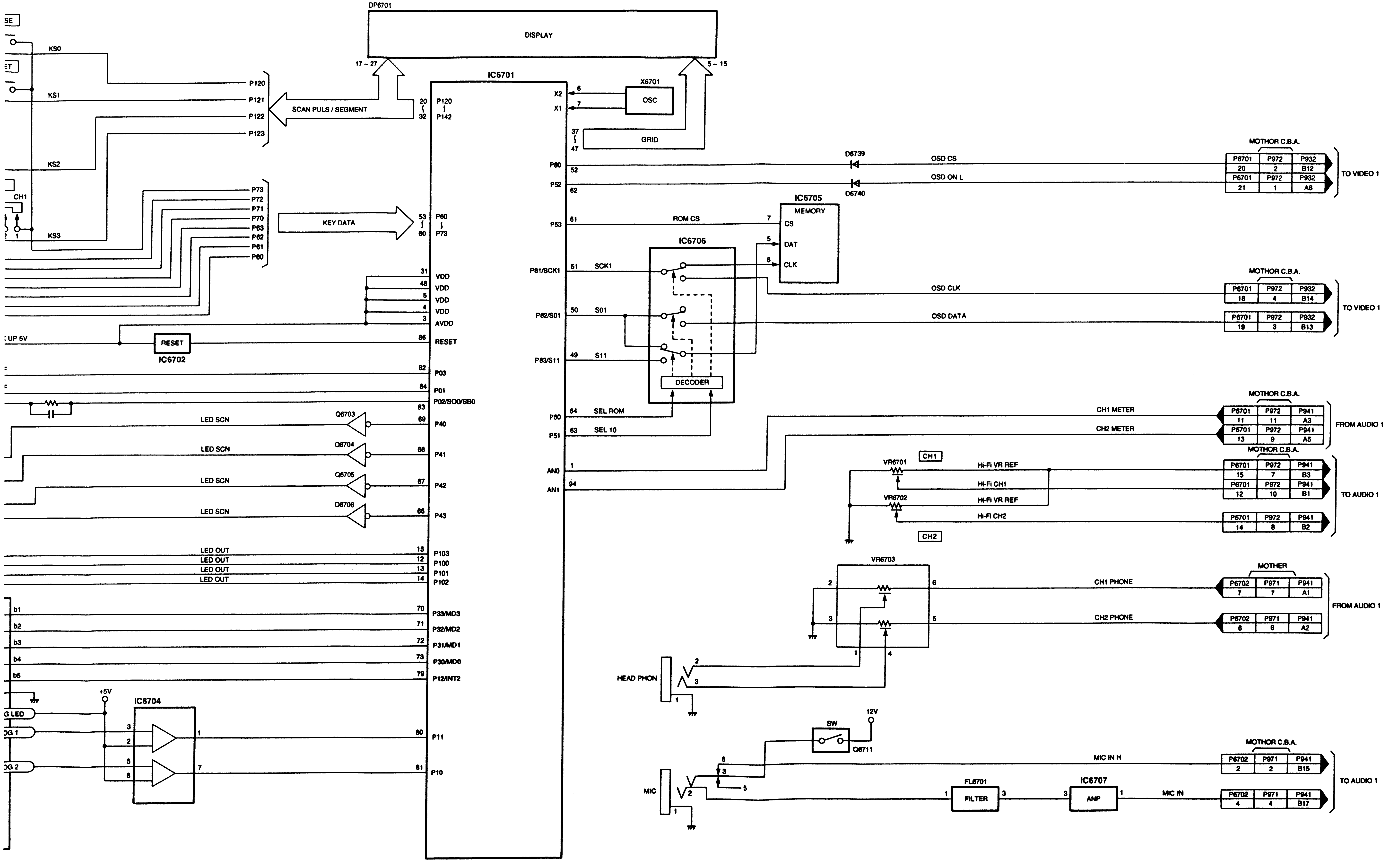
RANGE OF CLICK POINT

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
b^1	0	1	1	0	0	1	1	0	0	1	1	1	1	0	0	1	1	0	0	1	1	0
b^2	1	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1	0	0	0	0	1	1
b^3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1
b^4	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
b^5	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0

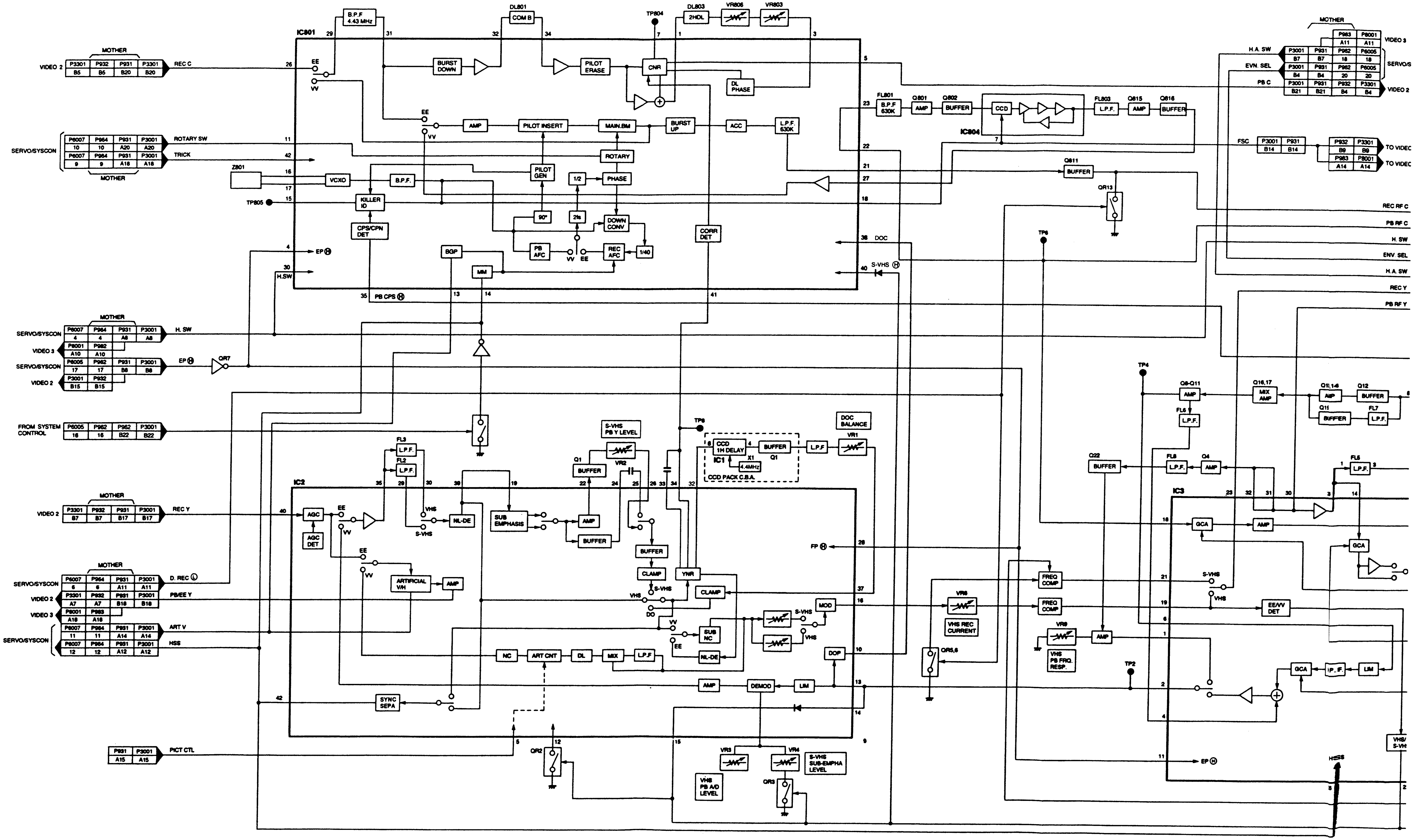
1 POSITION=6°STEP

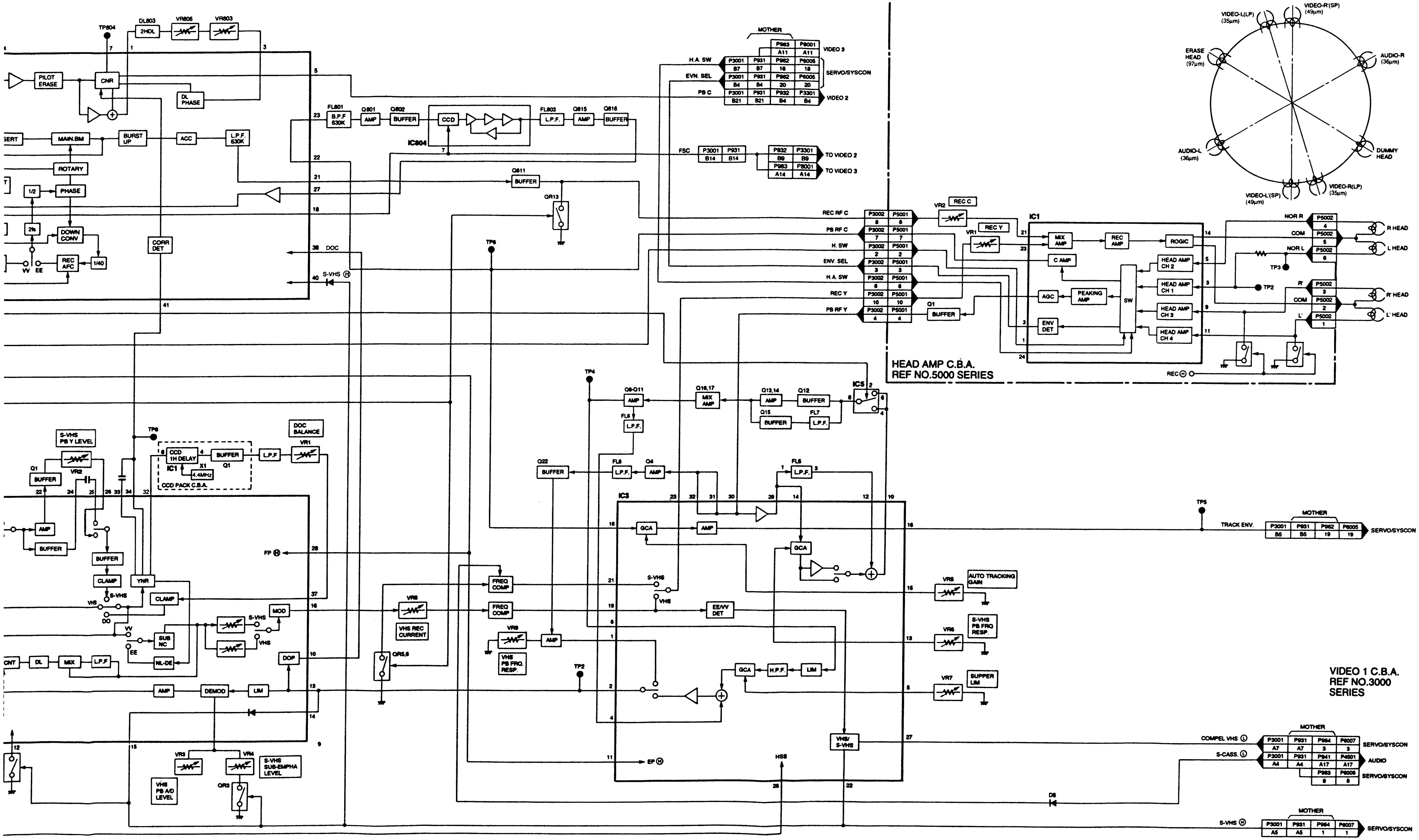
(1=ON
0=OFF)

※ 11 POSITION is 3°
12 POSITION is 6°

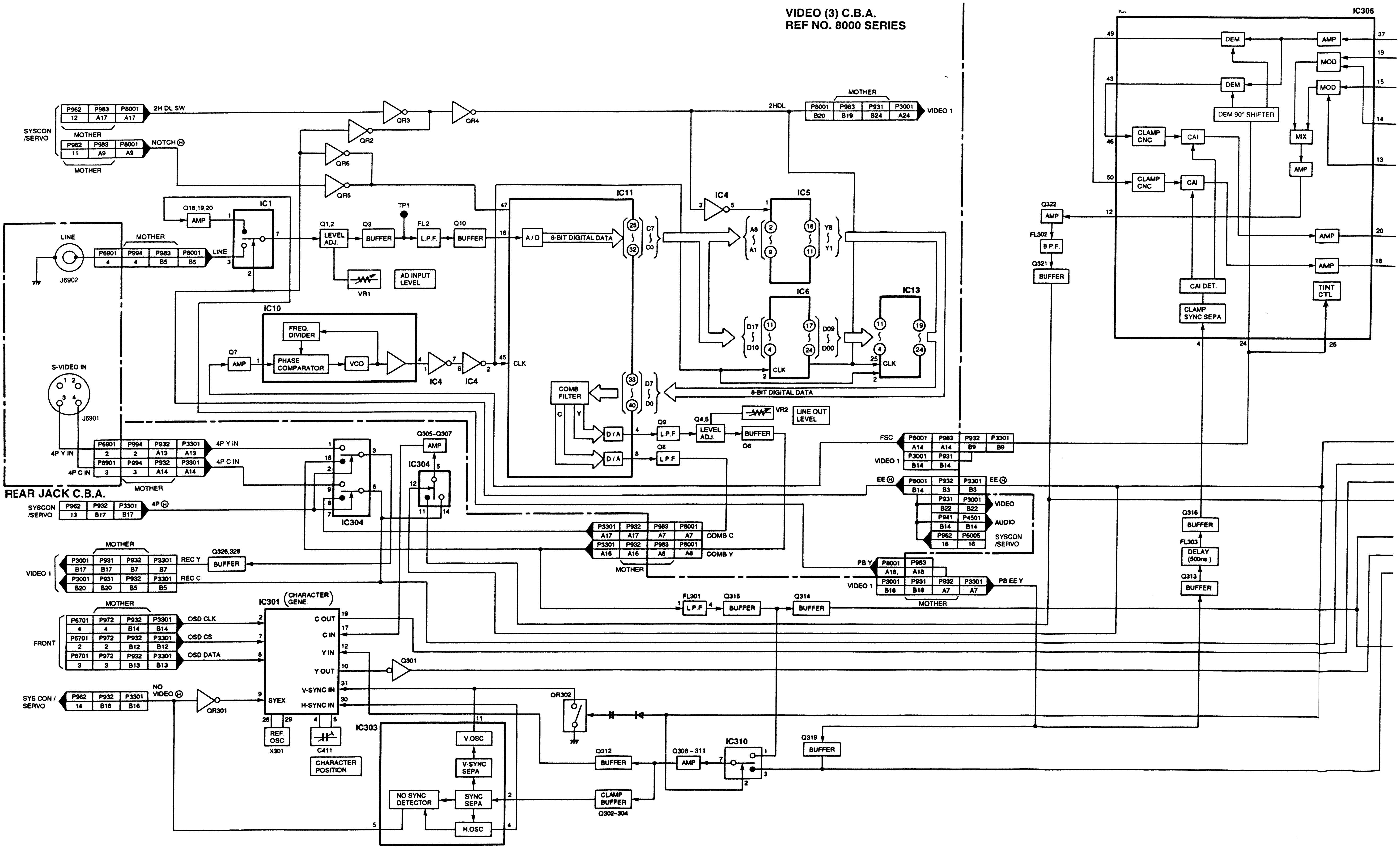

DP6701
DISPLAY
17 ~ 27
5 ~ 15
IC6701
X6701
OSC
X2
X1
GRID
SCAN PULS / SEGMENT
P120
P121
P122
P123
P120 ~ P142
KS0
KS1
KS2
KS3
CH1
P73
P72
P71
P70
P63
P62
P61
P60
KEY DATA
P60 ~ P73
VDD
VDD
VDD
VDD
AVDD
RESET
IC6702
UP 5V
P03
P01
P02/SO0/SB0
LED SCN
Q6703
P40
Q6704
P41
Q6705
P42
Q6706
P43
LED OUT
P103
P100
P101
P102
b1
b2
b3
b4
b5
P33/MD3
P32/MD2
P31/MD1
P30/MD0
P12/INT2
+5V
IC6704
G LED
OG 1
OG 2
P11
P10
P80
P52
D6739
D6740
OSD CS
OSD ON L
MOTHOR C.B.A.
P6701
P972
P932
20
2
B12
21
1
A8
TO VIDEO 1
IC6705
MEMORY
CS
DAT
CLK
ROM CS
P53
IC6706
P81/SCK1
SCK1
P82/S01
S01
P83/S11
S11
DECODER
OSD CLK
OSD DATA
18
4
B14
19
3
B13
P50
SEL ROM
P51
SEL 10
CH1 METER
CH2 METER
P941
11
11
A3
13
9
A5
FROM AUDIO 1
AN0
AN1
VR6701
VR6702
CH1
CH2
Hi-Fi VR REF
Hi-Fi CH1
Hi-Fi VR REF
Hi-Fi CH2
15
7
B3
12
10
B1
14
8
B2
TO AUDIO 1
VR6703
MOTHER
CH1 PHONE
CH2 PHONE
P6702
P971
7
7
A1
6
6
A2
HEAD PHON
SW
12V
Q6711
MIC
MIC IN H
2
2
B15
FL6701
FILTER
IC6707
AMP
MIC IN
4
4
B17

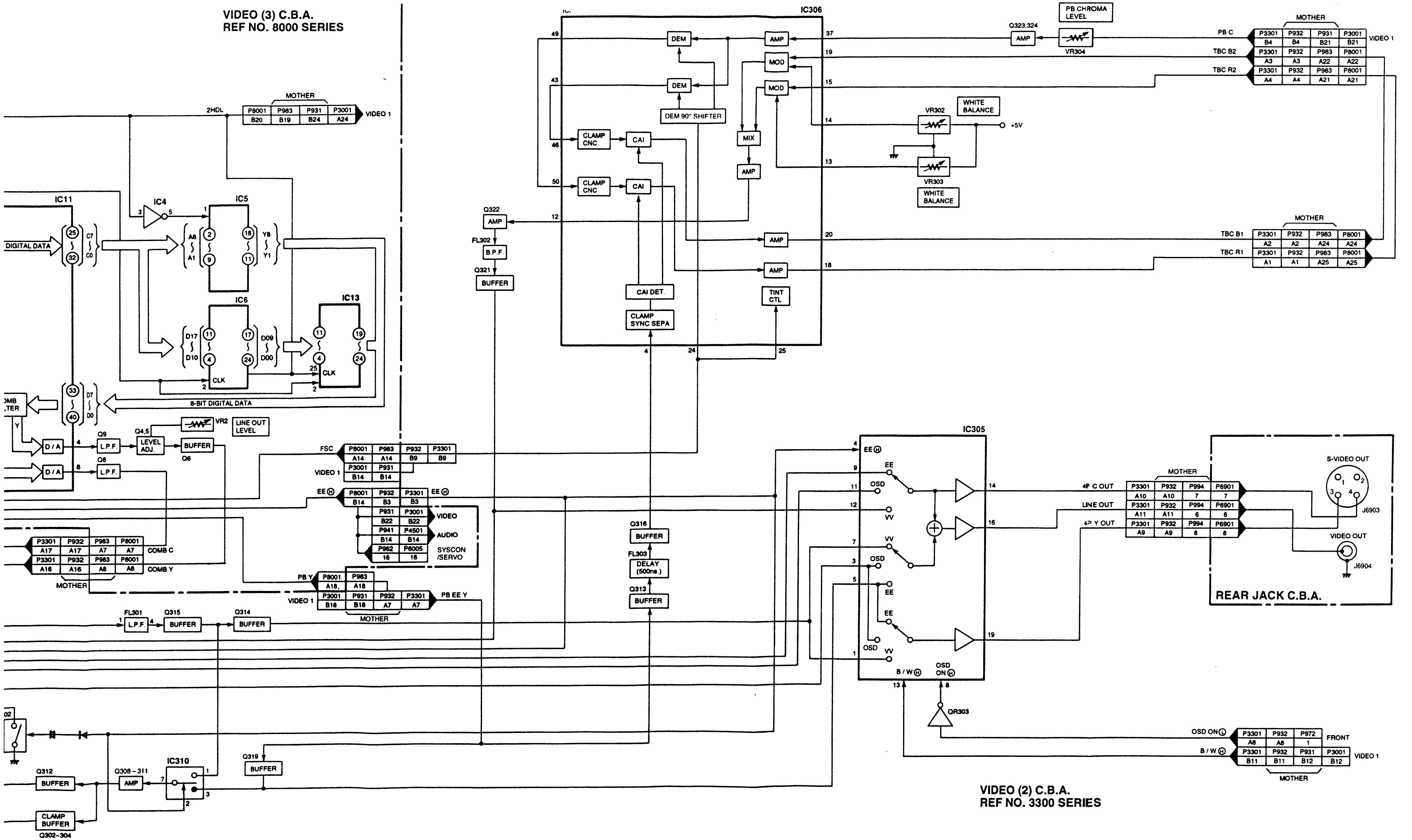
VIDEO 1 BLOCK DIAGRAM


IC801
B.P.F 4.43 MHz
DL801
COM B
TP804
DL803
2HDL
VR806
VR803
BURST DOWN
PILOT ERASE
CNR
DL PHASE
AMP
PILOT INSERT
MAIN.BM
BURST UP
ACC
L.P.F. 630K
ROTARY
PILOT GEN
1/2
PHASE
Z801
VCXO
B.P.F.
KILLER ID
90°
2fs
DOWN CONV
CPS/CPN DET
PB AFC
REC AFC
1/40
BGP
MM
CORR DET
TP805
EE
VV
EP Ⓗ
H.SW
PB CPS Ⓗ
DOC
S-VHS Ⓗ
VIDEO 2
MOTHER
REC C
SERVO/SYSCON
ROTARY SW
TRICK
VIDEO 3
H. SW
EP Ⓗ
QR7
FROM SYSTEM CONTROL
FL801
B.P.F 630K
Q801
AMP
Q802
BUFFER
IC804
CCD
FL803
L.P.F.
Q815
Q816
BUFFER
FSC
TO VIDEO
Q811
QR13
TP6
H.A. SW
EVN. SEL
PB C
SERVO/S
REC RF C
PB RF C
H. SW
ENV. SEL
H.A. SW
REC Y
PB RF Y
IC2
FL3
FL2
L.P.F.
AGC
AGC DET
VHS
S-VHS
NL-DE
SUB EMPHASIS
S-VHS PB Y LEVEL
VR2
Q1
BUFFER
BUFFER
CLAMP
YNR
CLAMP
TP8
CCD 1H DELAY
IC1
X1
4.4MHz
CCD PACK C.B.A.
DOC BALANCE
VR1
L.P.F
ARTIFICIAL V/H
AMP
SUB NC
NL-DE
MOD
DOP
NC
ART CNT
DL
MIX
DEMOD
LIM
SYNC SEPA
REC Y
D. REC Ⓛ
PB/EE Y
ART V
HSS
PICT CTL
QR2
VR3
VR4
VHS PB A/D LEVEL
S-VHS SUB-EMPHA LEVEL
QR3
FP Ⓗ
VR8
VHS REC CURRENT
QR5,6
VR9
VHS PB FRQ. RESP.
Q22
FREQ COMP
AMP
TP4
Q8-Q11
FL6
Q16,17
MIX AMP
Q11,1-8
Q12
Q11
BUFFER
FL7
FL8
Q4
FL5
IC3
GCA
EE/VV DET
TP2
I.P. IF.
EP Ⓗ
HSS
VHS/S-VHS


TP804
DL803
2HDL
VR806
VR803
PILOT ERASE
CNR
DL PHASE
MAIN.BM
BURST UP
ACC
L.P.F. 630K
ROTARY
1/2
PHASE
2fs
DOWN CONV
REC AFC
1/40
VV
EE
CORR DET
FL801
B.P.F 630K
Q801
AMP
Q802
BUFFER
CCD
IC804
FL803
L.P.F.
Q815
AMP
Q816
BUFFER
Q811
BUFFER
QR13
TP6
DOC
S-VHS Ⓗ
MOTHER
H.A. SW
EVN. SEL
PB C
VIDEO 3
SERVO/SYSCON
VIDEO 2
FSC
TO VIDEO 2
TO VIDEO 3
REC RF C
PB RF C
H. SW
ENV. SEL
H.A. SW
REC Y
PB RF Y
VR2
REC C
REC Y
VR1
IC1
MIX AMP
REC AMP
ROGIC
C AMP
HEAD AMP CH 2
HEAD AMP CH 1
HEAD AMP CH 3
HEAD AMP CH 4
AGC
PEAKING AMP
SW
ENV DET
Q1
BUFFER
HEAD AMP C.B.A.
REF NO.5000 SERIES
NOR R
COM
NOR L
R HEAD
L HEAD
TP3
TP2
R'
L'
R' HEAD
L' HEAD
REC Ⓗ
VIDEO-L(LP) (35μm)
VIDEO-R'(SP) (49μm)
ERASE HEAD (97μm)
AUDIO-R (36μm)
AUDIO-L (36μm)
DUMMY HEAD
VIDEO-L'(SP) (49μm)
VIDEO-R(LP) (35μm)
TP4
Q8-Q11
AMP
Q16,17
MIX AMP
Q13,14
AMP
Q12
BUFFER
Q15
BUFFER
FL7
L.P.F.
IC5
FL6
L.P.F.
S-VHS PB Y LEVEL
Q1
BUFFER
VR2
TP8
CCD 1H DELAY
IC1
X1 4.4MHz
BUFFER
Q1
CCD PACK C.B.A.
L.P.F
DOC BALANCE
VR1
Q22
BUFFER
FL8
L.P.F.
Q4
AMP
FL5
L.P.F.
IC3
AMP
BUFFER
BUFFER
CLAMP
YNR
CLAMP
S-VHS
VHS
DO
SUB NC
NL-DE
MOD
DOP
CNT
DL
MIX
L.P.F
AMP
DEMOD
LIM
FP Ⓗ
VR8
VHS REC CURRENT
QR5,6
FREQ COMP
FREQ COMP
VR9
VHS PB FRQ. RESP.
AMP
TP2
GCA
AMP
GCA
S-VHS
VHS
EE/VV DET
GCA
H.P.F.
LIM
VHS/ S-VHS
EP Ⓗ
HSS
VR3
VR4
VHS PB A/D LEVEL
S-VHS SUB-EMPHA LEVEL
QR3
VR5
AUTO TRACKING GAIN
VR6
S-VHS PB FRQ RESP.
VR7
SUPPER LIM
TP5
TRACK ENV.
VIDEO 1 C.B.A.
REF NO.3000
SERIES
COMPEL VHS Ⓛ
S-CASS. Ⓛ
AUDIO
D6
S-VHS Ⓗ

VIDEO 2, 3 BLOCK DIAGRAM

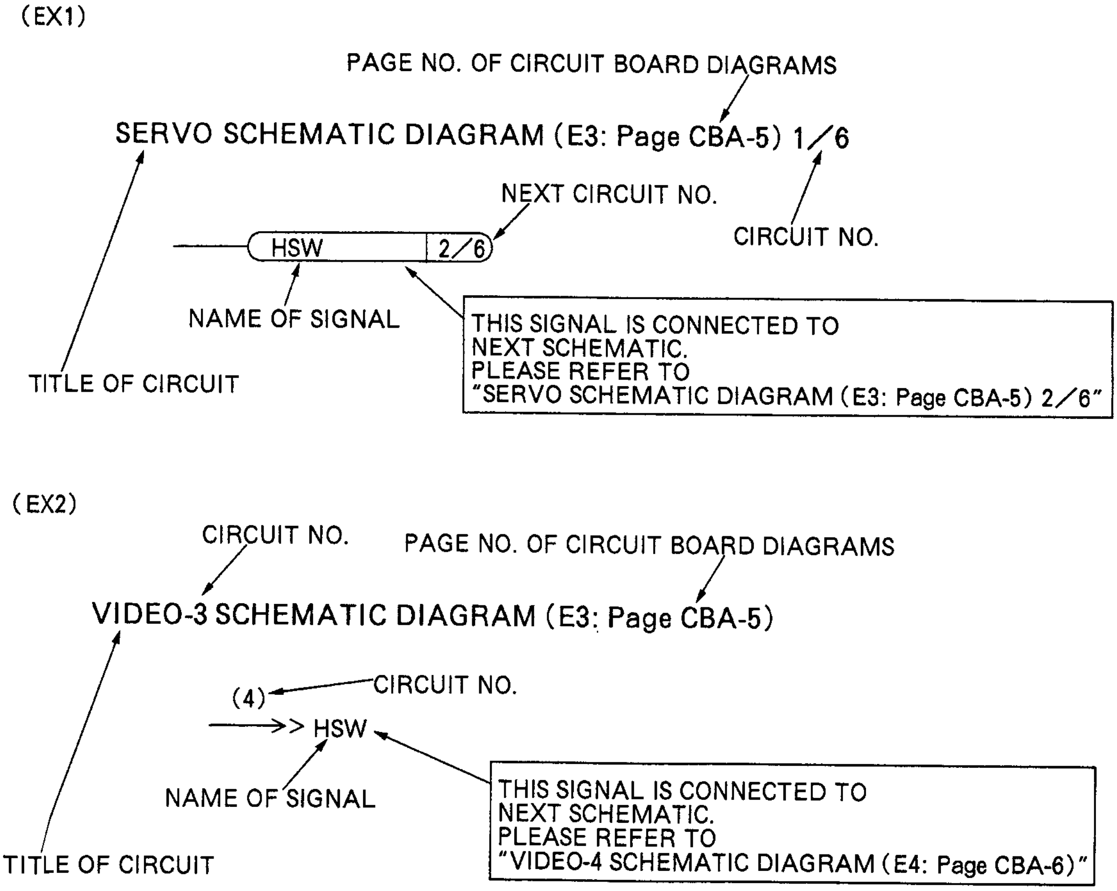

VIDEO (3) C.B.A.
REF NO. 8000 SERIES
IC306
SYSCON /SERVO
P962 P983 P8001
12 A17 A17
2H DL SW
MOTHER
11 A9 A9
NOTCH Ⓗ
QR3
QR4
QR2
QR6
QR5
2HDL
P8001 P983 P931 P3001
B20 B19 B24 A24
VIDEO 1
LINE
J6902
P6901 P994 P983 P8001
4 4 B5 B5
Q18,19,20
AMP
IC1
Q1,2
LEVEL ADJ.
Q3
BUFFER
TP1
FL2
L.P.F.
Q10
BUFFER
VR1
AD INPUT LEVEL
IC10
FREQ. DIVIDER
PHASE COMPARATOR
VCO
Q7
AMP
IC4
CLK
IC11
A / D
8-BIT DIGITAL DATA
C7
C0
D7
D0
COMB FILTER
D/A
IC5
IC6
IC13
A8
A1
Y8
Y1
D17
D10
D09
D00
S-VIDEO IN
J6901
REAR JACK C.B.A.
4P Y IN
4P C IN
P6901 P994 P932 P3301
2 2 A13 A13
3 3 A14 A14
SYSCON /SERVO
P962 P932 P3301
13 B17 B17
4P Ⓗ
IC304
Q305~Q307
AMP
Q9
L.P.F.
Q8
L.P.F.
Q4,5
LEVEL ADJ.
BUFFER
Q6
VR2
LINE OUT LEVEL
P3301 P932 P983 P8001
A17 A17 A7 A7
COMB C
A16 A16 A8 A8
COMB Y
VIDEO 1
P3001 P931 P932 P3301
B17 B17 B7 B7
REC Y
B20 B20 B5 B5
REC C
Q326,328
BUFFER
FRONT
P6701 P972 P932 P3301
4 4 B14 B14
OSD CLK
2 2 B12 B12
OSD CS
3 3 B13 B13
OSD DATA
IC301 (CHARACTER GENE.)
C OUT
C IN
Y IN
Y OUT
V-SYNC IN
H-SYNC IN
SYEX
Q301
SYS CON / SERVO
P962 P932 P3301
14 B16 B16
NO VIDEO Ⓗ
QR301
REF. OSC
X301
C411
CHARACTER POSITION
IC303
V.OSC
V-SYNC SEPA
SYNC SEPA
NO SYNC DETECTOR
H.OSC
QR302
Q312
BUFFER
CLAMP BUFFER
Q302-304
Q308~311
AMP
IC310
Q319
BUFFER
FL301
L.P.F.
Q315
BUFFER
Q314
BUFFER
FSC
P8001 P983 P932 P3301
A14 A14 B9 B9
P3001 P931
B14 B14
EE Ⓗ
P8001 P932 P3301
B14 B3 B3
P931 P3001
B22 B22
VIDEO
P941 P4501
B14 B14
AUDIO
P962 P6005
16 16
SYSCON /SERVO
PB Y
P8001 P983
A18 A18
P3001 P931 P932 P3301
B18 B18 A7 A7
PB EE Y
Q322
AMP
FL302
B.P.F.
Q321
BUFFER
DEM
AMP
MOD
DEM 90° SHIFTER
CLAMP CNC
CAI
MIX
CAI DET.
CLAMP SYNC SEPA
TINT CTL
Q316
BUFFER
FL303
DELAY (500ns.)
Q313
BUFFER


VIDEO (3) C.B.A.
REF NO. 8000 SERIES
VIDEO (2) C.B.A.
REF NO. 3300 SERIES
REAR JACK C.B.A.
IC306
IC305
IC310
IC11
IC4
IC5
IC6
IC13
MOTHER
2HDL
VIDEO 1
DIGITAL DATA
8-BIT DIGITAL DATA
CLK
D/A
L.P.F.
LEVEL ADJ.
BUFFER
VR2
LINE OUT LEVEL
Q9
Q8
Q4,5
Q6
COMB C
COMB Y
FSC
EE Ⓗ
VIDEO
AUDIO
SYSCON /SERVO
PB Y
PB EE Y
FL301
Q315
Q314
Q312
Q308 ~ 311
AMP
CLAMP BUFFER
Q302 ~ 304
Q319
DEM
DEM 90° SHIFTER
CLAMP CNC
CAI
CAI DET.
CLAMP SYNC SEPA
MOD
MIX
TINT CTL
Q322
FL302
B.P.F.
Q321
Q323,324
PB CHROMA LEVEL
VR304
PB C
TBC B2
TBC R2
TBC B1
TBC R1
VR302
VR303
WHITE BALANCE
+5V
Q316
FL303
DELAY (500ns.)
Q313
OSD
VV
EE
B / W Ⓗ
OSD ON Ⓗ
QR303
OSD ON Ⓛ
FRONT
4P C OUT
LINE OUT
4P Y OUT
S-VIDEO OUT
J6903
VIDEO OUT
J6904
P8001
P983
P931
P3001
P932
P3301
P941
P4501
P962
P6005
P994
P6901
P972

SECTION 6

SCHEMATIC DIAGRAMS

NOTE


(EX1)
PAGE NO. OF CIRCUIT BOARD DIAGRAMS
SERVO SCHEMATIC DIAGRAM (E3: Page CBA-5) 1/6
NEXT CIRCUIT NO.
HSW
2/6
CIRCUIT NO.
NAME OF SIGNAL
TITLE OF CIRCUIT
(EX2)
CIRCUIT NO.
PAGE NO. OF CIRCUIT BOARD DIAGRAMS
VIDEO-3 SCHEMATIC DIAGRAM (E3: Page CBA-5)
(4)
CIRCUIT NO.
>> HSW
NAME OF SIGNAL
TITLE OF CIRCUIT

THIS SIGNAL IS CONNECTED TO NEXT SCHEMATIC.
PLEASE REFER TO
"SERVO SCHEMATIC DIAGRAM (E3: Page CBA-5) 2/6"

THIS SIGNAL IS CONNECTED TO NEXT SCHEMATIC.
PLEASE REFER TO
"VIDEO-4 SCHEMATIC DIAGRAM (E4: Page CBA-6)"

CONTENTS

POWER SUPPLY (1~3) SCHEMATIC DIAGRAM ······ SCM-3
SYSTEM CONTROL SCHEMATIC DIAGRAM (1/6) ······ SCM-4
SERVO SCHEMATIC DIAGRAM (3/0) ······ SCM-5
MOTOR DRIVE SCHEMATIC DIAGRAM (4/6) ······ SCM-6
REEL SERVO SCHEMATIC DIAGRAM (2/6) ······ SCM-7
DC-DC CONVERTOR SCHEMATIC DIAGRAM (5/6) ······ SCM-8
CONNECTION SCHEMATIC DIAGRAM (6/6) ······ SCM-9
REEL DRIVE SCHEMATIC DIAGRAM ······ SCM-10
FRONT (1) SCHEMATIC DIAGRAM (1/4) ······ SCM-11
FRONT (2) SCHEMATIC DIAGRAM (2/4) ······ SCM-12
FRONT (3) SCHEMATIC DIAGRAM (3/4) ······ SCM-12
FRONT (4) SCHEMATIC DIAGRAM (4/4) ······ SCM-13
VIDEO (1) SCHEMATIC DIAGRAM (1/2) ······ SCM-14
VIDEO (1) SCHEMATIC DIAGRAM (2/2) ······ SCM-16
VIDEO (2) SCHEMATIC DIAGRAM ······ SCM-19
VIDEO (3) SCHEMATIC DIAGRAM (1/2) ······ SCM-20
VIDEO (3) SCHEMATIC DIAGRAM (2/2) ······ SCM-21
AUDIO 1 SCHEMATIC DIAGRAM ······ SCM-22
FM AUDIO PACK SCHEMATIC DIAGRAM (IC4505) ······ SCM-23
AUDIO 2 SCHEMATIC DIAGRAM ······ SCM-24
HEAD AMP SCHEMATIC DIAGRAM ······ SCM-25
REAR JACK SCHEMATIC DIAGRAM ······ SCM-26
MOTHER SCHEMATIC DIAGRAM ······ SCM-27
INTERCONNECTION SCHEMATIC DIAGRAM ······ SCM-28

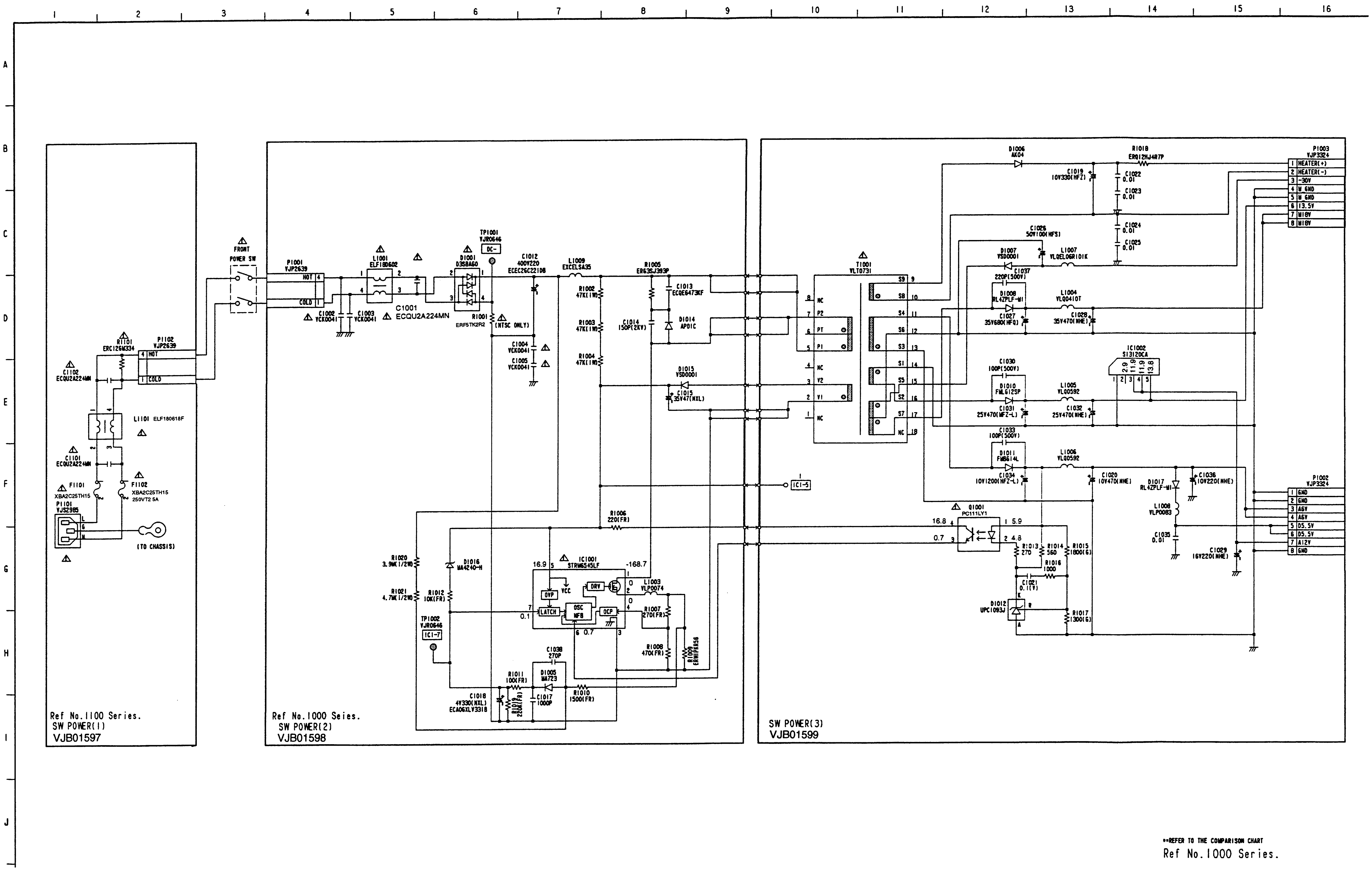
IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE

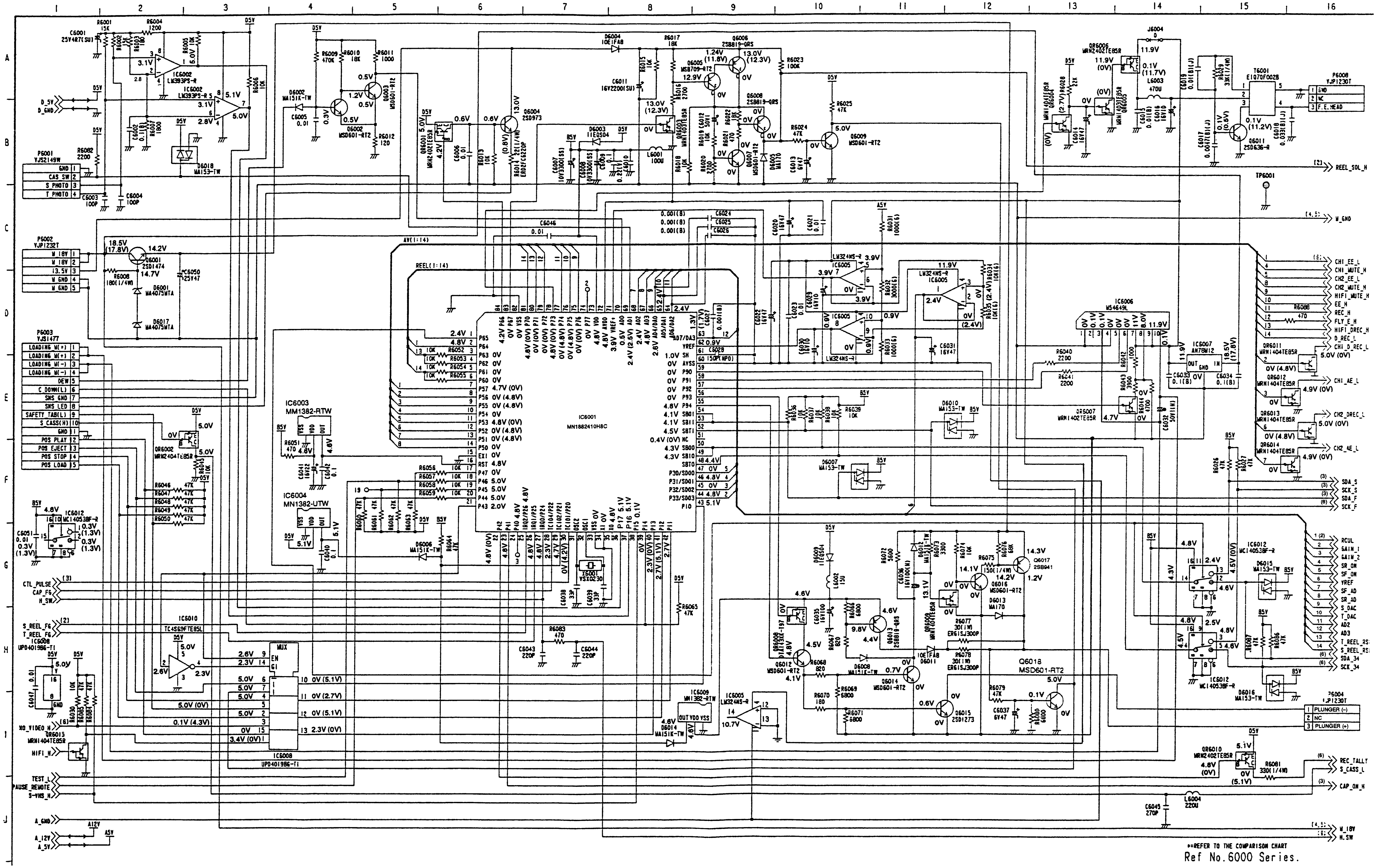
DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

POWER SUPPLY (1~3) SCHEMATIC DIAGRAM (E1,E2,E3: Page CBA-3)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
P1101
VJS2985
L
G
N
(TO CHASSIS)
F1101
XBA2C25TH15
F1102
XBA2C25TH15
250VT2 5A
C1101
ECQU2A224MN
L1101 ELF180618F
C1102
ECQU2A224MN
R1101
ERC12GM334
P1102
VJP2639
4 HOT
1 COLD
Ref No.1100 Series.
SW POWER(1)
VJB01597
FRONT
POWER SW
P1001
VJP2639
HOT 4
COLD 1
C1002
YCK0041
C1003
YCK0041
L1001
ELF180602
C1001
ECQU2A224MN
D1001
D3SBA60
TP1001
VJR0646
DC-
R1001
ERF5TK2R2
(NTSC ONLY)
C1012
400V220
ECEC2GC221DB
C1004
YCK0041
C1005
YCK0041
L1009
EXCELSA35
R1002
47K(1W)
R1003
47K(1W)
R1004
47K(1W)
R1005
ER63SJ393P
C1013
ECQE6473KF
C1014
150P(2KV)
D1014
AP01C
D1015
VSD0001
C1015
35V47(NXL)
R1006
220(FR)
R1020
3.9MK(1/2W)
R1021
4.7MK(1/2W)
D1016
MA4240-H
R1012
10K(FR)
TP1002
VJR0646
IC1-7
IC1001
STRM6545LF
16.9
-168.7
OVP
VCC
DRV
LATCH
OSC
NFB
OCP
0.1
0.7
L1003
VLP0074
R1007
270(FR)
R1008
470(FR)
R1009
ERWIPKR56
C1038
270P
R1011
100(FR)
D1005
MA723
R1010
1500(FR)
C1018
4V330(NXL)
ECA0GXLV331B
R1019
220K(FR)
C1017
1000P
Ref No.1000 Seies.
SW POWER(2)
VJB01598
T1001
VLT0731
NC
P2
PT
P1
V2
V1
S9
S8
S4
S6
S3
S1
S5
S2
S7
IC1-5
D1006
AK04
C1019
10V330(HFZ)
C1022
0.01
C1023
0.01
C1024
0.01
C1025
0.01
R1018
ERQ12HJ4R7P
C1026
50V100(HFS)
D1007
VSD0001
L1007
VLQEL06R101K
C1037
220P(500V)
D1008
RL4ZPLF-MI
L1004
VLQ0410T
C1027
35V680(HFQ)
C1028
35V470(NHE)
IC1002
SI3120CA
2.9
11.9
11.9
13.8
C1030
100P(500V)
D1010
FML612SP
L1005
VLQ0592
C1031
25V470(MFZ-L)
C1032
25V470(NHE)
C1033
100P(500V)
D1011
FMB614L
L1006
VLQ0592
C1034
10V1200(HFZ-L)
C1020
10V470(NHE)
D1017
RL4ZPLF-MI
C1036
10V220(NHE)
L1008
VLP0083
C1035
0.01
C1029
16V220(NHE)
Q1001
PC111LY1
16.8
0.7
5.9
4.8
R1013
270
R1014
560
R1015
1800(G)
R1016
1000
C1021
0.1(V)
D1012
UPC1093J
K
R
A
R1017
1300(G)
P1003
VJP3324
1 HEATER(+)
2 HEATER(-)
3 -30V
4 M GND
5 M GND
6 13.5V
7 M18V
8 M18V
P1002
VJP3324
1 GND
2 GND
3 A6V
4 A6V
5 D5.5V
6 D5.5V
7 A12V
8 GND
SW POWER(3)
VJB01599

**REFER TO THE COMPARISON CHART
Ref No.1000 Series.

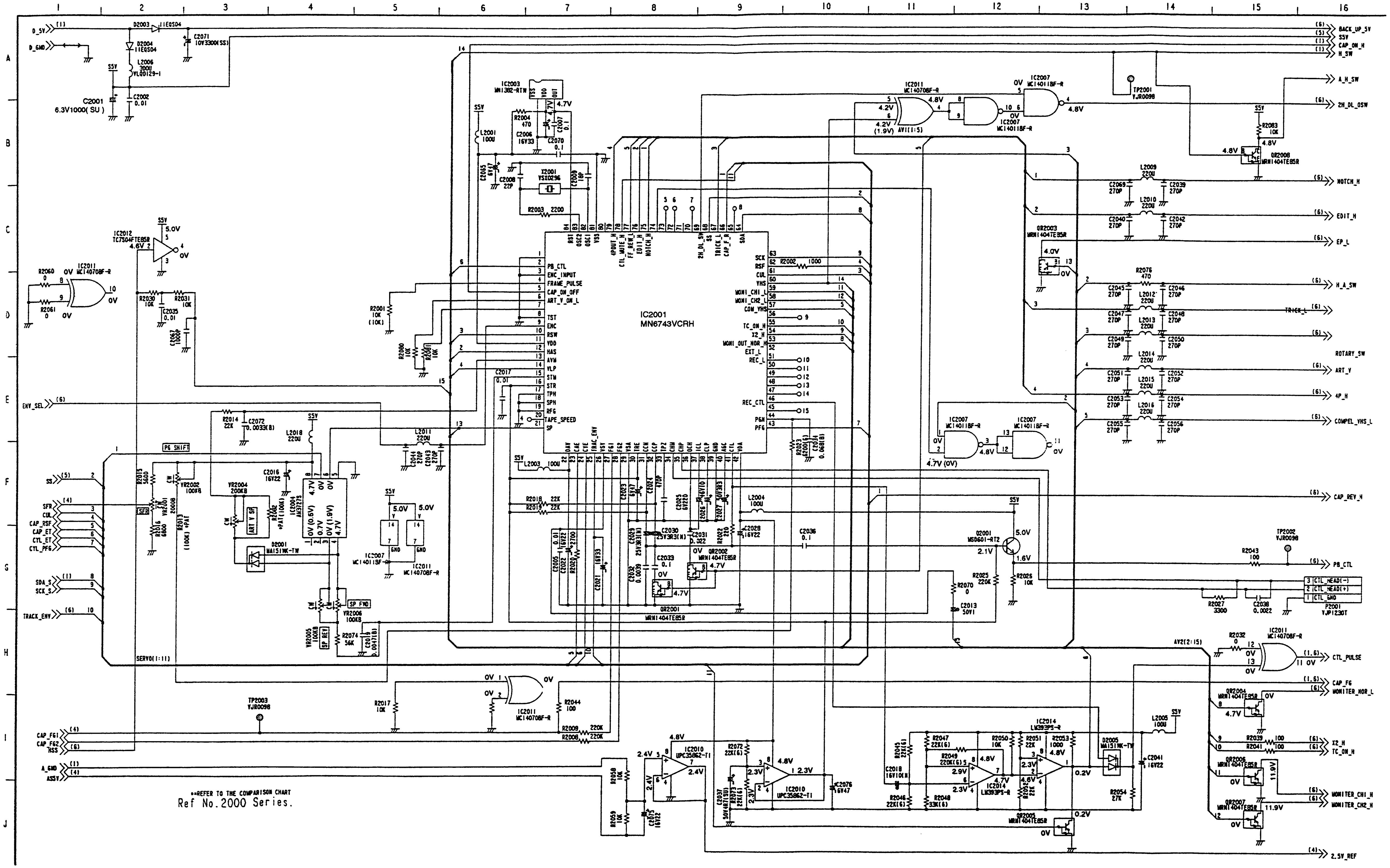
SYSTEM CONTROL SCHEMATIC DIAGRAM (E4: Page CBA-5) 1/6

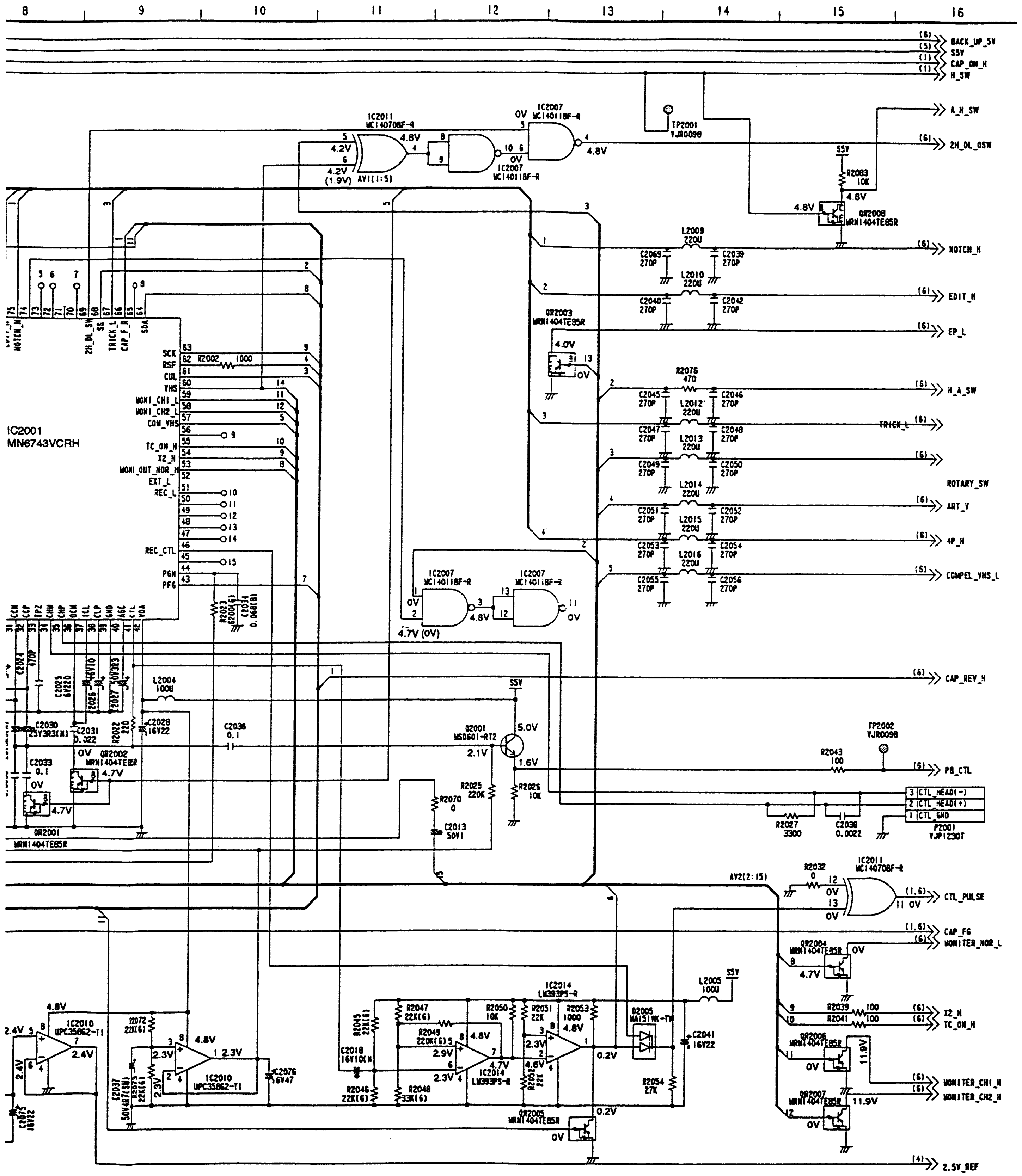

IC6001
MN1882410H8C
IC6002
LM393PS-R
IC6003
MM1382-RTW
IC6004
MN1382-UTW
IC6005
LM324NS-R
IC6006
M54649L
IC6007
AN78M12
IC6008
UPD4019B6-T1
IC6009
MN1382-RTW
IC6010
TC4S69FTE85L
IC6012
MC14053BF-R
MUX
X6001
T6001
EI070F002B
P6001
YJS2149W
P6002
YJP1232T
P6003
YJS1477
P6004
YJP1230T
P6008
YJP1230T
J6004
TP6001
GND
CAS SW
S PHOTO
T PHOTO
W 18V
13.5V
W GND
LOADING M(+)
LOADING M(-)
DEW
C DOWN(L)
SNS GND
SNS LED
SAFETY TAB(L)
S CASS(H)
POS PLAY
POS EJECT
POS STOP
POS LOAD
END
NC
F.E.HEAD
PLUNGER (-)
PLUNGER (+)
D_5V
D_GND
CTL_PULSE
CAP_FG
H_SW
S_REEL_FG
T_REEL_FG
HIFI_H
TEST_L
PAUSE_REMOTE
S-VHS_H
A_GND
A_12V
A_5V
REEL_SOL_H
W_GND
CH1_EE_L
CH1_MUTE_H
CH2_EE_L
CH2_MUTE_H
HIFI_MUTE_H
EE_H
REC_H
FLY_E_H
HIFI_DREC_H
D_REC_L
CH1_D_REC_L
CH1_AE_L
CH2_DREC_L
CH2_AE_L
SDA_S
SCK_S
SDA_F
SCK_F
RCUL
GAIN_1
GAIN_2
SR_ON
SF_ON
VREF
SF_AD
SR_AD
S_DAC
T_DAC
AD2
AD3
T_REEL_RST
S_REEL_RST
SDA_34
SCK_34
REC_TALLY
S_CASS_L
CAP_ON_H
W_18V
H.SW
AV(1:14)
REEL(1:14)

*=REFER TO THE COMPARISON CHART

Ref No.6000 Series.

SERVO SCHEMATIC DIAGRAM (E4: Page CBA-5) 3/6

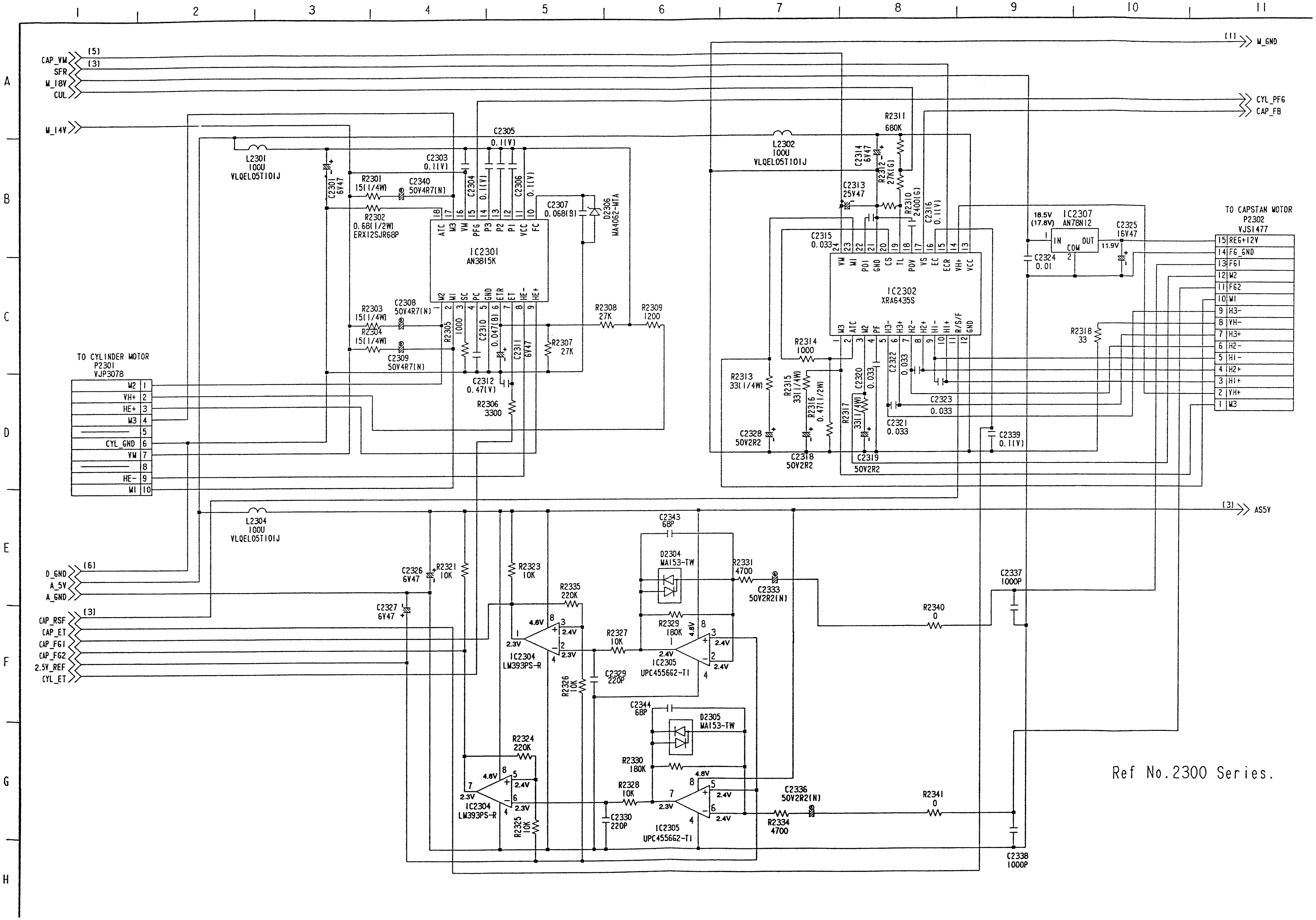

IC2001
MN6743VCRH
IC2003
MN1382-RTW
IC2011
MC14070BF-R
IC2007
MC14011BF-R
IC2012
TC7S04FTE85R
IC2004
AN3727S
IC2010
UPC35862-T1
IC2014
LM393PS-R
Q2001
MSD601-RT2
QR2001
QR2002
QR2003
QR2004
QR2005
QR2006
QR2007
QR2008
MRN1404TE85R
X2001
VSX0296
D2001
MA151WK-TW
D2003
11EQS04
D2004
11EQS04
D2005
MA151WK-TW
C2001
6.3V1000(SU)
C2071
10V3300(SS)
L2006
300U
TP2001
YJR0098
TP2002
YJR0098
TP2003
YJR0098
P2001
YJP1230T
VR2002
VR2004
VR2005
VR2006
PG SHIFT
SFR
ART Y SR
SP FWD
SP REV
D_5V
D_GND
S5V
ENV_SEL
SS
SFR
CUL
CAP_RSF
CAP_ET
CTL_ET
CTL_PFG
SDA_S
SCK_S
TRACK_ENV
CAP_FG1
CAP_FG2
HSS
A_GND
A5V
BACK_UP_5V
S5V
CAP_ON_H
N_SW
A_H_SW
2H_DL_OSW
NOTCH_H
EDIT_H
EP_L
H_A_SW
TRICK_L
ROTARY_SW
ART_Y
4P_H
COMPEL_VHS_L
CAP_REV_H
PB_CTL
CTL_HEAD(-)
CTL_HEAD(+)
CTL_GND
CTL_PULSE
CAP_FG
MONITER_NOR_L
X2_H
TC_ON_H
MONITER_CH1_H
MONITER_CH2_H
2.5V_REF
PB_CTL
ENC_INPUT
FRAME_PULSE
CAP_ON_OFF
ART_Y_ON_L
TST
ENC
RSW
VDD
HAS
AYM
VLP
STM
STR
TPH
SPH
RFG
TAPE_SPEED
SP
SCK
RSF
CUL
VHS
MONI_CH1_L
MONI_CH2_L
COM_VHS
TC_ON_H
X2_H
MONI_OUT_NOR_H
EXT_L
REC_L
REC_CTL
PGN
PFG
SERVO(1:11)
AV1(1:5)
AV2(2:15)
**REFER TO THE COMPARISON CHART
Ref No.2000 Series.

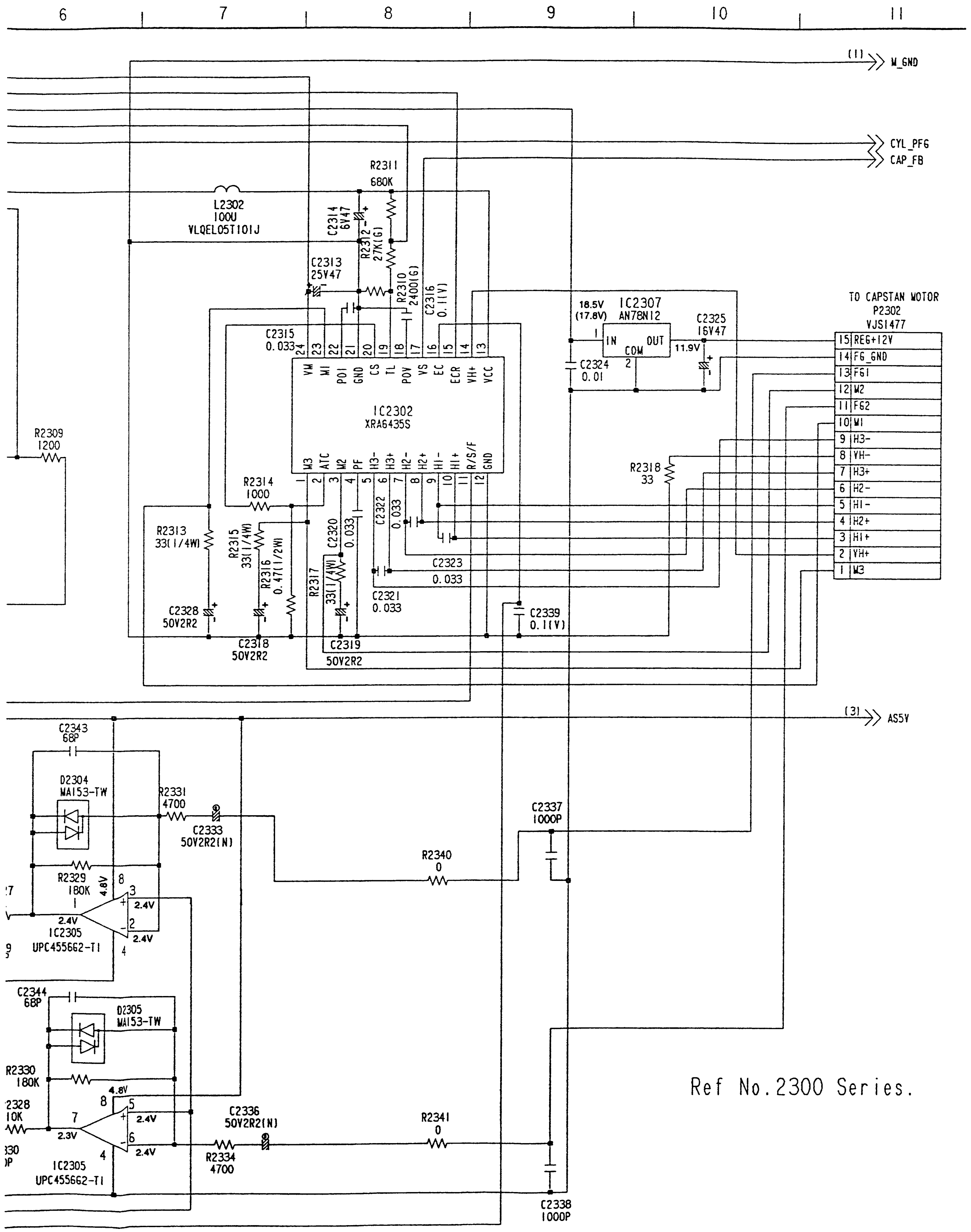

8
9
10
11
12
13
14
15
16
BACK_UP_5V
S5V
CAP_ON_H
H_SW
A_H_SW
2H_DL_OSW
NOTCH_H
EDIT_H
EP_L
H_A_SW
TRICK_L
ROTARY_SW
ART_V
4P_H
COMPEL_VHS_L
CAP_REV_H
PB_CTL
CTL_PULSE
CAP_FG
MONITER_NOR_L
X2_H
TC_ON_H
MONITER_CH1_H
MONITER_CH2_H
2.5V_REF
IC2001
MN6743VCRH
IC2011
MC14070BF-R
IC2007
MC14011BF-R
IC2010
UPC358G2-T1
IC2014
LM393PS-R
QR2001
QR2002
QR2003
QR2004
QR2005
QR2006
QR2007
QR2008
MRN1404TE85R
Q2001
MSD601-RT2
TP2001
TP2002
YJR0098
P2001
YJP1230T
CTL_HEAD(-)
CTL_HEAD(+)
CTL_GND
D2005
MA151WK-TW
L2004
L2005
L2009
L2010
L2012
L2013
L2014
L2015
L2016
220U
100U
R2002
R2025
R2027
R2043
R2054
C2036
C2038
C2041
4.8V
4.2V
2.3V
4.7V
0V
11.9V
0.2V
5.0V
2.1V
1.6V

IC2001

PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC
1	0V	0V	13	0V	0V	25	2.0V	0V	37	2.3V	2.3V	49	0V	0V	61	4.7V	4.7V	73	0V	0V
2	0.2V	0.2V	14	0V	0V	26	2.3V	2.3V	38	2.3V	2.3V	50	0V	0V	62	0V	0V	74	4.7V	0V
3	0V	0V	15	0V	0V	27	2.2V	2.2V	39	0V	0V	51	0V	0V	63	4.7V	4.7V	75	0V	0V
4	0V	0V	16	2.3V	2.3V	28	2.3V	2.3V	40	2.8V	2.3V	52	0V	0V	64	4.5V	4.5V	76	0V	0V
5	4.8V	4.8V	17	0V	0V	29	0V	0V	41	2.3V	2.3V	53	0V	4.7V	65	4.7V	4.7V	77	4.7V	4.7V
6	0V	0V	18	0V	0V	30	2.3V	2.3V	42	4.8V	4.8V	54	0V	0V	66	0V	0V	78	0V	0V
7	0V	0V	19	0V	0V	31	2.5V	2.5V	43	0.8V	0.8V	55	0V	0V	67	4.7V	4.7V	79	0V	0V
8	0V	0V	20	0V	0V	32	2.4V	2.4V	44	2.8V	2.8V	56	0V	0V	68	0V	0V	80	0V	0V
9	4.4V	0V	21	0V	0V	33	4.7V	4.7V	45	0V	0V	57	0V	0V	69	0V	0V	81	0V	0V
10	4.1V	4.8V	22	4.8V	4.8V	34	0V	2.8V	46	0V	4.7V	58	0V	0V	70	0V	0V	82	2.1V	2.1V
11	4.7V	4.7V	23	2.4V	2.4V	35	0V	3.3V	47	0V	0V	59	0V	0V	71	4.7V	4.7V	83	2.1V	2.1V
12	0V	0V	24	2.3V	2.3V	36	0V	0V	48	0V	0V	60	4.7V	4.7V	72	0V	0V	84	4.7V	4.7V

MOTOR DRIVE SCHEMATIC DIAGRAM (E4: Page CBA-5) 4/6


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
CAP_VM
SFR
M_18V
CUL
M_14V
(5)
(3)
(1)
M_GND
CYL_PFG
CAP_FB
L2301
100U
VLQEL05T101J
C2301
6V47
R2301
15(1/4W)
R2302
0.68(1/2W)
ERX12SJR68P
C2303
0.1(V)
C2340
50V4R7(N)
C2304
0.1(V)
C2305
0.1(V)
C2306
0.1(V)
C2307
0.068(B)
D2306
MA4062-MTA
IC2301
AN3815K
ATC
M3
VM
PFG
P3
P2
P1
VCC
FC
M2
M1
SC
PC
GND
ETR
ET
HE-
HE+
R2303
15(1/4W)
R2304
15(1/4W)
C2308
50V4R7(N)
C2309
50V4R7(N)
R2305
1000
C2310
0.047(B)
C2311
6V47
C2312
0.47(V)
R2306
3300
R2307
27K
R2308
27K
R2309
1200
TO CYLINDER MOTOR
P2301
VJP3078
M2
VH+
HE+
M3
CYL_GND
VM
HE-
M1
L2302
100U
VLQEL05T101J
R2311
680K
C2314
6V47
R2312
27K(G)
C2313
25V47
R2310
2400(G)
C2316
0.1(V)
C2315
0.033
IC2302
XRA6435S
VM
M1
PO1
GND
CS
TL
POV
VS
EC
ECR
VH+
VCC
M3
ATC
M2
PF
H3-
H3+
H2-
H2+
H1-
H1+
R/S/F
GND
R2313
33(1/4W)
R2314
1000
R2315
33(1/4W)
R2316
0.47(1/2W)
R2317
33(1/4W)
C2320
0.033
C2322
0.033
C2323
0.033
C2321
0.033
C2328
50V2R2
C2318
50V2R2
C2319
50V2R2
C2339
0.1(V)
18.5V
(17.8V)
IC2307
AN78N12
IN
OUT
COM
11.9V
C2324
0.01
C2325
16V47
R2318
33
TO CAPSTAN MOTOR
P2302
VJS1477
REG+12V
FG_GND
FG1
M2
FG2
M1
H3-
VH-
H3+
H2-
H1-
H2+
H1+
VH+
M3
L2304
100U
VLQEL05T101J
AS5V
D_GND
A_5V
A_GND
(6)
C2326
6V47
R2321
10K
R2323
10K
C2327
6V47
CAP_RSF
CAP_ET
CAP_FG1
CAP_FG2
2.5V_REF
CYL_ET
R2335
220K
IC2304
LM393PS-R
4.8V
2.3V
2.4V
R2326
10K
R2327
10K
C2329
220P
C2343
68P
D2304
MA153-TW
R2329
180K
R2331
4700
C2333
50V2R2(N)
IC2305
UPC4556G2-T1
C2337
1000P
R2340
0
C2344
68P
D2305
MA153-TW
R2330
180K
R2324
220K
R2325
10K
R2328
10K
C2330
220P
C2336
50V2R2(N)
R2334
4700
R2341
0
C2338
1000P
Ref No.2300 Series.


6
7
8
9
10
11
(1) M_GND
CYL_PFG
CAP_FB
R2311
680K
L2302
100U
VLQEL05T101J
C2314
6V47
R2312
27K(G)
C2313
25V47
R2310
2400(G)
C2316
0.1(V)
C2315
0.033
VM
MI
POI
GND
CS
TL
POV
VS
EC
ECR
VH+
VCC
IC2302
XRA6435S
M3
ATC
M2
PF
H3-
H3+
H2-
H2+
H1-
H1+
R/S/F
GND
18.5V
(17.8V)
IC2307
AN78N12
IN
OUT
COM
11.9V
C2325
16V47
C2324
0.01
TO CAPSTAN MOTOR
P2302
VJS1477
15 REG+12V
14 FG_GND
13 FG1
12 M2
11 FG2
10 M1
9 H3-
8 VH-
7 H3+
6 H2-
5 H1-
4 H2+
3 H1+
2 VH+
1 M3
R2309
1200
R2314
1000
R2313
33(1/4W)
R2315
33(1/4W)
R2316
0.47(1/2W)
R2317
33(1/4W)
C2320
0.033
C2322
0.033
C2323
0.033
C2321
0.033
R2318
33
C2328
50V2R2
C2318
50V2R2
C2319
50V2R2
C2339
0.1(V)
(3) AS5V
C2343
68P
D2304
MA153-TW
R2331
4700
C2333
50V2R2(N)
R2329
180K
4.8V
2.4V
IC2305
UPC455662-T1
C2337
1000P
R2340
0
C2344
68P
D2305
MA153-TW
R2330
180K
2328
10K
2.3V
R2334
4700
C2336
50V2R2(N)
R2341
0
C2338
1000P

Ref No.2300 Series.

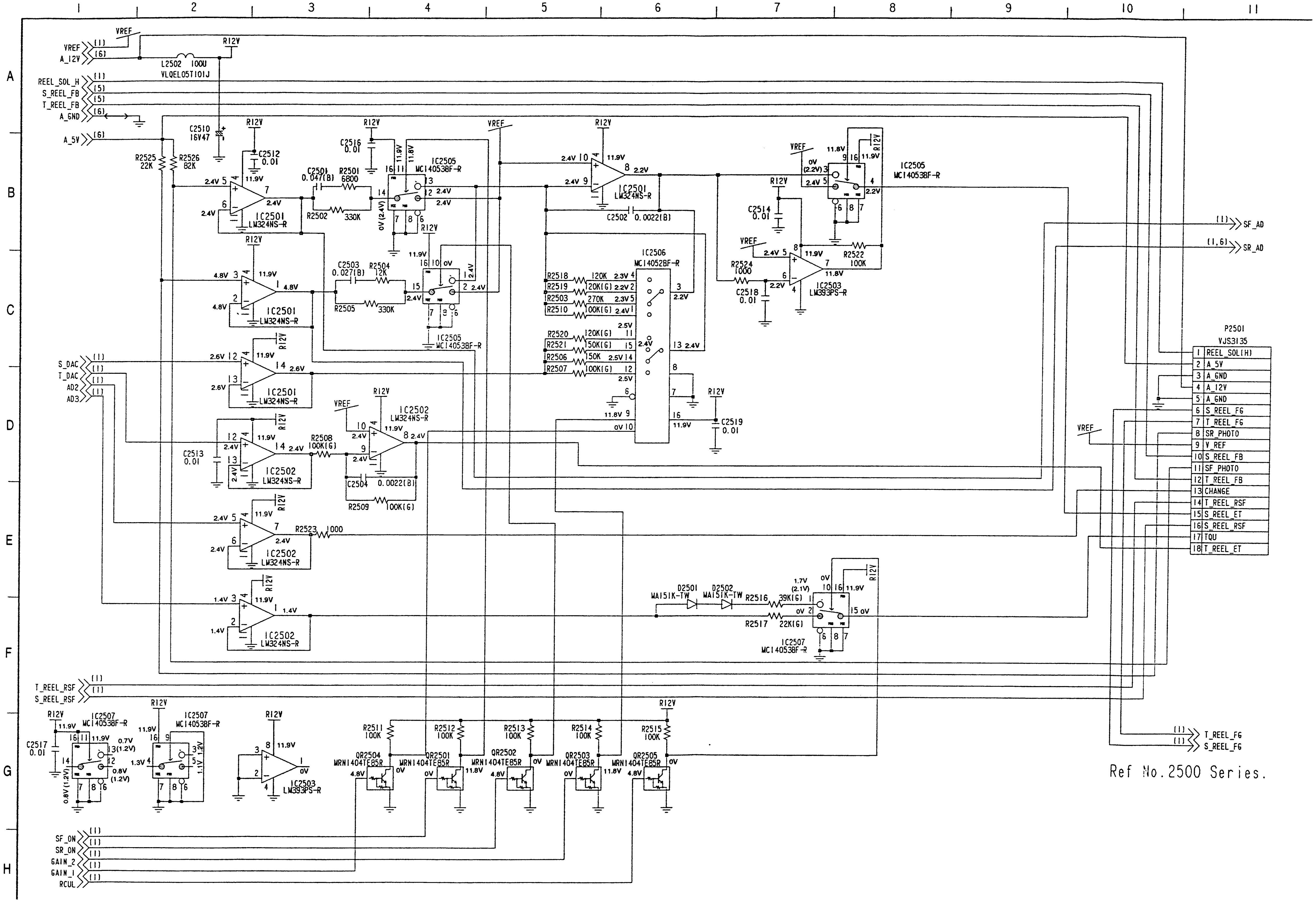
IC2301

PIN No.	PLAY	REC	PIN No.	PLAY	REC
1	12.5V	12.5V	13	3.5V	3.5V
2	12.6V	12.6V	14	3.5V	3.5V
3	0.3V	0.3V	15	1.1V	1.1V
4	1.1V	1.1V	16	12.8V	12.8V
5	0V	0V	17	12.6V	12.6V
6	2.4V	2.4V	18	0V	0V
7	2.3V	2.3V			
8	0.5V	0.5V			
9	0.4V	0.4V			
10	2.5V	2.5V			
11	4.8V	4.8V			
12	3.5V	3.5V			

IC2302

PIN No.	PLAY	REC	PIN No.	PLAY	REC
1	—	—	13	4.8V	4.8V
2	0V	0V	14	3.4V	3.4V
3	1.8V	1.8V	15	2.5V	2.5V
4	1.4V	1.4V	16	2.4V	2.4V
5	1.9V	1.9V	17	2.5V	2.5V
6	1.9V	1.9V	18	0.5V	0.5V
7	1.9V	1.9V	19	0.3V	0.3V
8	1.9V	1.9V	20	0V	0V
9	1.9V	1.9V	21	0V	0V
10	1.9V	1.9V	22	0.6V	0.6V
11	0V	0V	23	—	—
12	0V	0V	24	9.3V	9.3V

REEL SERVO SCHEMATIC DIAGRAM (E4: Page CBA-5) 2/6



1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
VREF (1)
A_12V (6)
R12V
L2502 100U
VLQEL05T101J
REEL_SOL_H (1)
S_REEL_FB (5)
T_REEL_FB (5)
A_GND (6)
A_5V (6)
C2510 16V47
R2525 22K
R2526 82K
C2512 0.01
IC2501 LM324NS-R
C2516 0.01
C2501 0.047(B)
R2501 6800
R2502 330K
IC2505 MC14053BF-R
C2502 0.0022(B)
IC2503 LM393PS-R
R2522 100K
R2524 1000
C2514 0.01
C2518 0.01
C2503 0.027(B)
R2504 12K
R2505 330K
IC2506 MC14052BF-R
R2518 120K
R2519 120K(G)
R2503 270K
R2510 100K(G)
R2520 120K(G)
R2521 150K(G)
R2506 150K
R2507 100K(G)
C2519 0.01
SF_AD (1)
SR_AD (1,6)
S_DAC (1)
T_DAC (1)
AD2 (1)
AD3 (1)
IC2502 LM324NS-R
C2513 0.01
R2508 100K(G)
C2504 0.0022(B)
R2509 100K(G)
R2523 1000
D2501 MA151K-TW
D2502 MA151K-TW
R2516 39K(G)
R2517 22K(G)
IC2507 MC14053BF-R
P2501
VJS3135
1 REEL_SOL(H)
2 A_5V
3 A_GND
4 A_12V
5 A_GND
6 S_REEL_FG
7 T_REEL_FG
8 SR_PHOTO
9 V_REF
10 S_REEL_FB
11 SF_PHOTO
12 T_REEL_FB
13 CHANGE
14 T_REEL_RSF
15 S_REEL_ET
16 S_REEL_RSF
17 TQU
18 T_REEL_ET
T_REEL_RSF (1)
S_REEL_RSF (1)
C2517 0.01
R2511 100K
R2512 100K
R2513 100K
R2514 100K
R2515 100K
QR2504 MRN1404TE85R
QR2501 MRN1404TE85R
QR2502 MRN1404TE85R
QR2503 MRN1404TE85R
QR2505 MRN1404TE85R
T_REEL_FG (1)
S_REEL_FG (1)
SF_ON (1)
SR_ON (1)
GAIN_2 (1)
GAIN_1 (1)
RCUL (1)
Ref No.2500 Series.

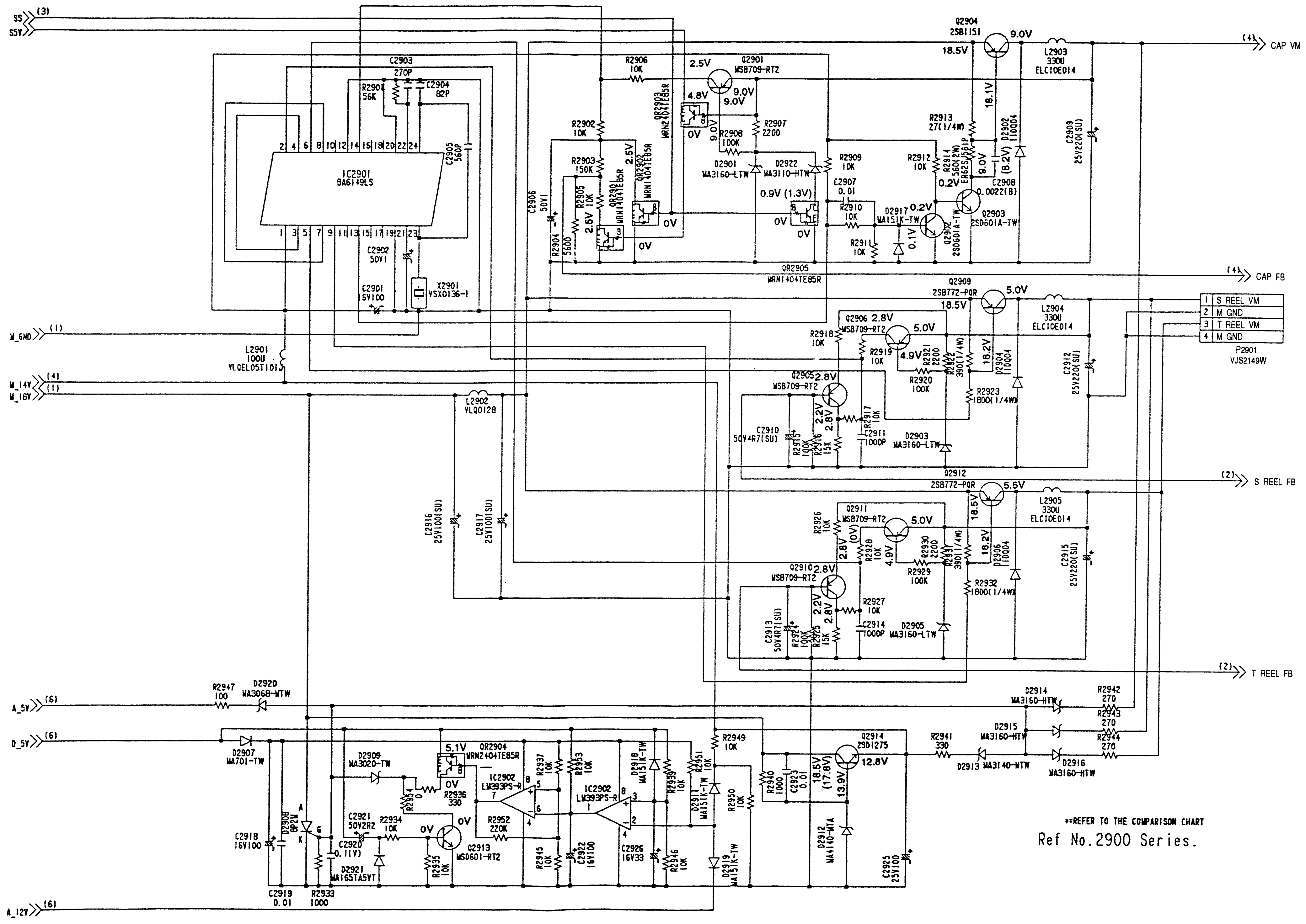
DC-DC CONVERTOR SCHEMATIC DIAGRAM (E4: Page CBA-5)

IC2901

PIN No.	PLAY	REC
1	12.8V	12.8V
2	2.8V	2.8V
3	2.9V	2.9V
4	2.9V	2.9V
5	17.0V	16.4V
6	2.8V	2.8V
7	2.9V	2.9V
8	2.9V	2.9V
9	16.5V	15.5V
10	1.0V	2.0V
11	1.0V	2.0V
12	0V	0V
13	1.5V	1.5V
14	2.5V	2.5V
15	0.5V	0.5V
16	1.2V	2.1V
17	0.5V	0.5V
18	1.2V	2.1V
19	0V	0V
20	0V	0V
21	2.4V	2.4V
22	2.3V	2.3V
23	2.8V	2.8V
24	2.4V	2.4V

IC2902

PIN No.	PLAY	REC
1	0V	0V
2	4.9V	4.9V
3	2.5V	2.5V
4	0V	0V
5	2.5V	2.5V
6	0V	0V
7	—	—
8	4.9V	4.9V

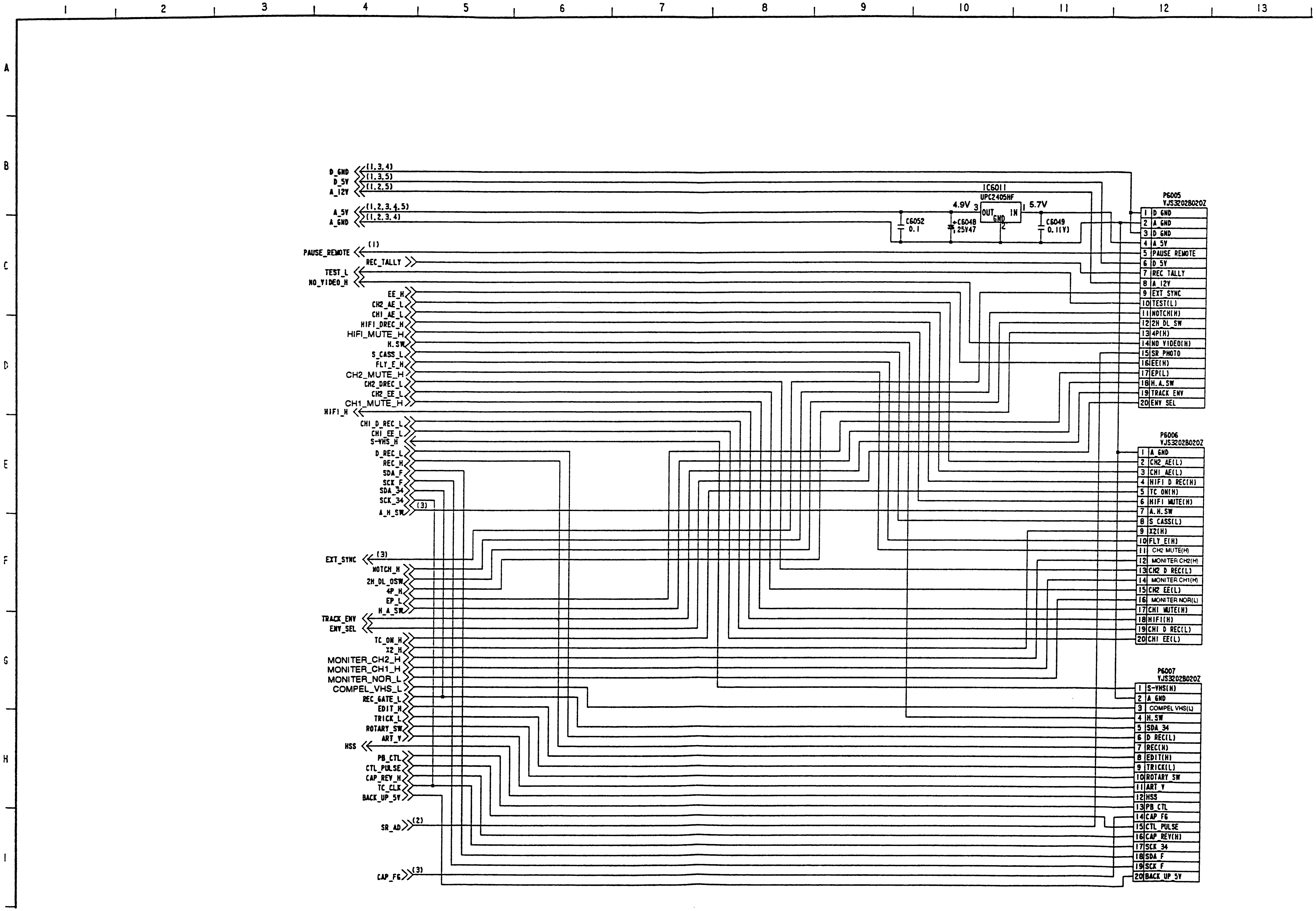


SS
S5V
M_GND
M_14V
M_18V
A_5V
D_5V
A_12V
IC2901 BA6149LS
X2901 VSX0136-1
L2901 100U VLQEL05T101J
L2902 VLQ0128
Q2904 2SB1151
L2903 330U ELC10E014
CAP VM
CAP FB
Q2901 MSB709-RT2
QR2903 MRN2404TE85R
QR2902 MRN1404TE85R
QR2905 MRN1404TE85R
Q2902 2SD601A-TW
Q2903 2SD601A-TW
Q2909 2SB772-PQR
L2904 330U ELC10E014
Q2906 MSB709-RT2
Q2905 MSB709-RT2
Q2912 2SB772-PQR
L2905 330U ELC10E014
Q2911 MSB709-RT2
Q2910 MSB709-RT2
S REEL FB
T REEL FB
1 S REEL VM
2 M GND
3 T REEL VM
4 M GND
P2901 VJS2149W
QR2904 MRN2404TE85R
IC2902 LM393PS-R
Q2913 MSD601-RT2
Q2914 2SD1275
D2920 MA3068-MTW
D2907 MA701-TW
D2909 MA3020-TW
D2921 MA165TA5YT
D2913 MA3140-MTW
D2912 MA4140-MTA
9.0V
18.5V
5.0V
5.5V
12.8V

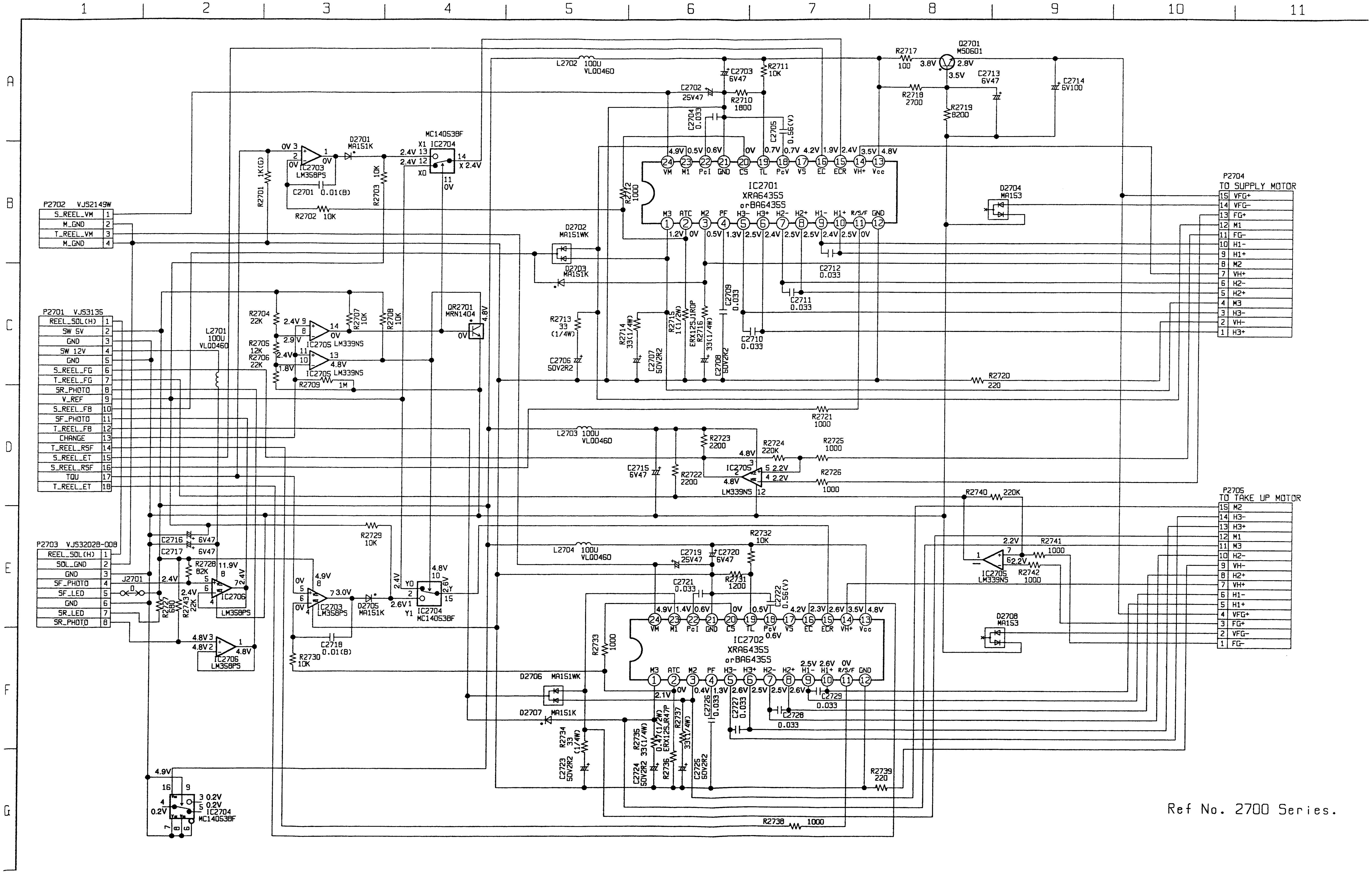
*=REFER TO THE COMPARISON CHART

Ref No.2900 Series.

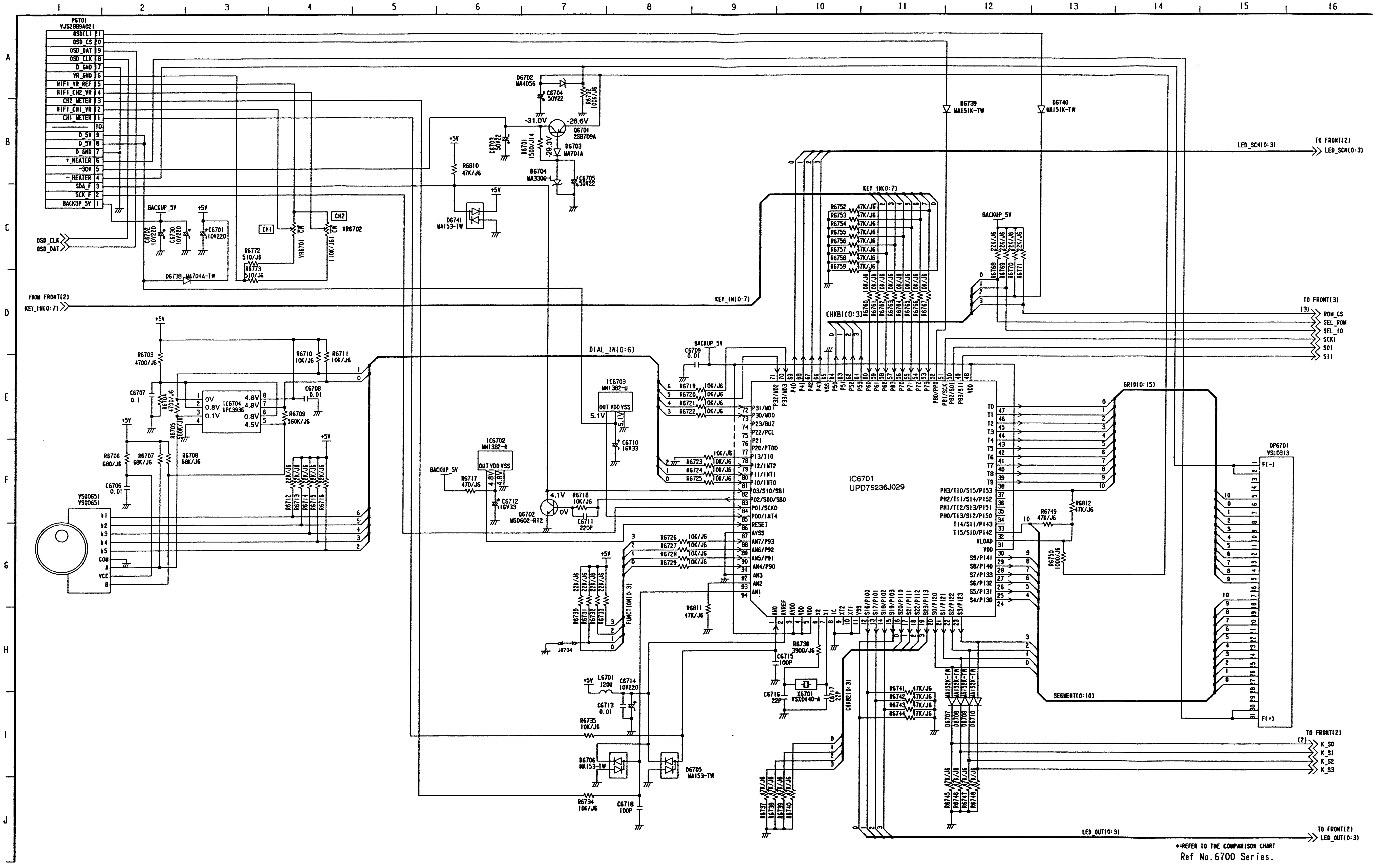
CONNECTION SCHEMATIC DIAGRAM (E4: Page CBA-5) 6/6


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
D_GND
D_5V
A_12V
(1.3.4)
(1.3.5)
(1.2.5)
A_5V
A_GND
(1.2.3.4.5)
(1.2.3.4)
(1)
PAUSE_REMOTE
REC_TALLY
TEST_L
NO_VIDEO_H
EE_H
CH2_AE_L
CH1_AE_L
HIFI_DREC_H
HIFI_MUTE_H
H.SW
S_CASS_L
FLY_E_H
CH2_MUTE_H
CH2_DREC_L
CH2_EE_L
CH1_MUTE_H
HIFI_H
CH1_D_REC_L
CH1_EE_L
S-VHS_H
D_REC_L
REC_H
SDA_F
SCK_F
SDA_34
SCK_34
(3)
A_H_SW
(3)
EXT_SYNC
NOTCH_H
2H_DL_OSW
4P_H
EP_L
H_A_SW
TRACK_ENV
ENV_SEL
TC_ON_H
X2_H
MONITER_CH2_H
MONITER_CH1_H
MONITER_NOR_L
COMPEL_VHS_L
REC_GATE_L
EDIT_H
TRICK_L
ROTARY_SW
ART_V
HSS
PB_CTL
CTL_PULSE
CAP_REV_H
TC_CLK
BACK_UP_5V
(2)
SR_AD
(3)
CAP_FG
IC6011
UPC2405HF
4.9V
3
OUT
GND
IN
1
2
5.7V
C6052
0.1
C6048
25V47
C6049
0.1(V)
P6005
VJS3202B020Z
1 D GND
2 A GND
3 D GND
4 A 5V
5 PAUSE REMOTE
6 D 5V
7 REC TALLY
8 A 12V
9 EXT SYNC
10 TEST(L)
11 NOTCH(H)
12 2H DL SW
13 4P(H)
14 NO VIDEO(H)
15 SR PHOTO
16 EE(H)
17 EP(L)
18 H.A.SW
19 TRACK ENV
20 ENV SEL
P6006
VJS3202B020Z
1 A GND
2 CH2 AE(L)
3 CH1 AE(L)
4 HIFI D REC(H)
5 TC ON(H)
6 HIFI MUTE(H)
7 A.H.SW
8 S CASS(L)
9 X2(H)
10 FLY E(H)
11 CH2 MUTE(H)
12 MONITER CH2(H)
13 CH2 D REC(L)
14 MONITER CH1(H)
15 CH2 EE(L)
16 MONITER NOR(L)
17 CH1 MUTE(H)
18 HIFI(H)
19 CH1 D REC(L)
20 CH1 EE(L)
P6007
VJS3202B020Z
1 S-VHS(H)
2 A GND
3 COMPEL VHS(L)
4 H.SW
5 SDA 34
6 D REC(L)
7 REC(H)
8 EDIT(H)
9 TRICK(L)
10 ROTARY SW
11 ART V
12 HSS
13 PB CTL
14 CAP FG
15 CTL PULSE
16 CAP REV(H)
17 SCK 34
18 SDA F
19 SCK F
20 BACK UP 5V

REEL DRIVE SCHEMATIC DIAGRAM (E11: Page CBA-3)

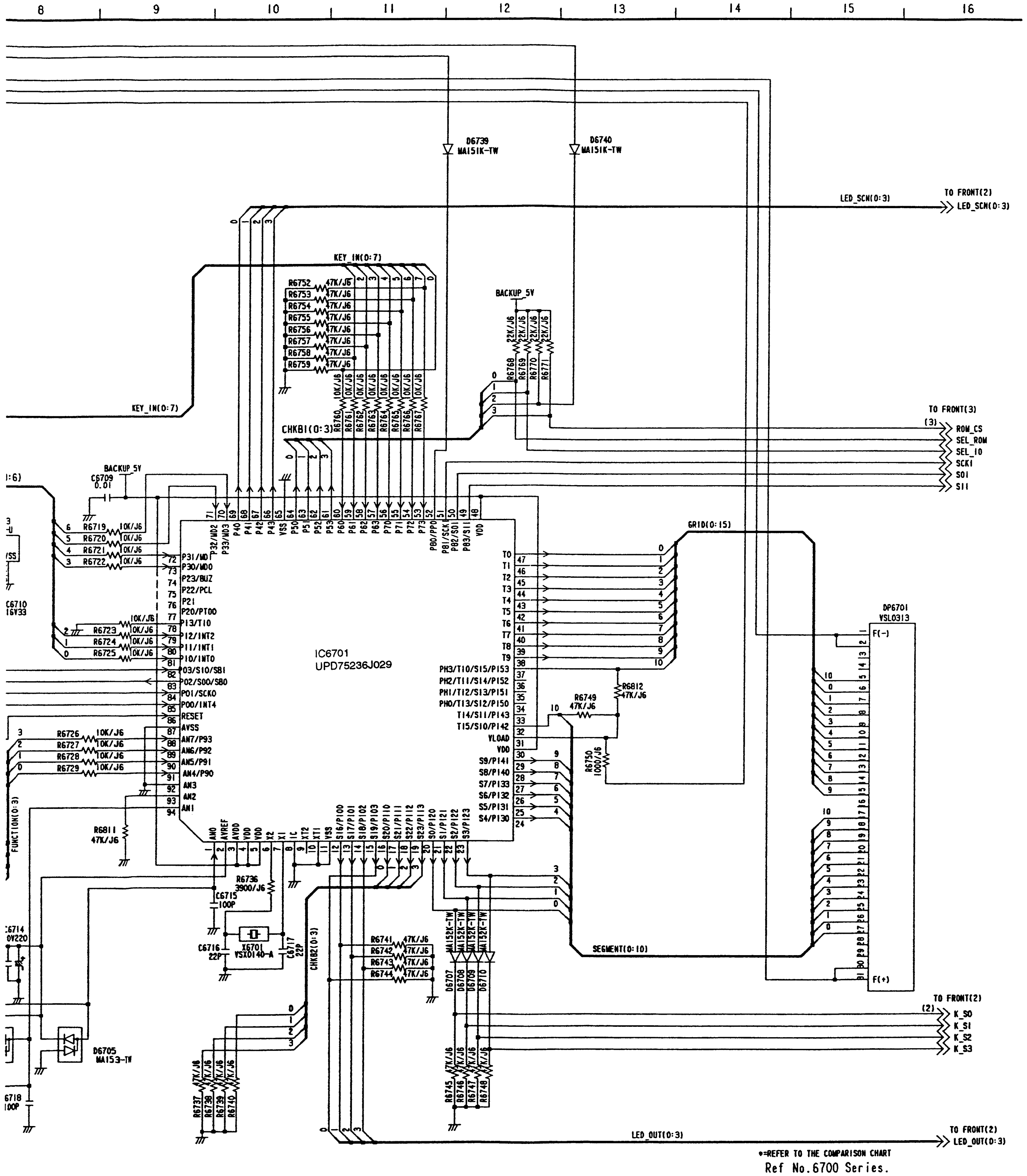

1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
P2702 VJS2149W
1 S_REEL_VM
2 M_GND
3 T_REEL_VM
4 M_GND
P2701 VJS3135
1 REEL_SOL(H)
2 SW 5V
3 GND
4 SW 12V
5 GND
6 S_REEL_FG
7 T_REEL_FG
8 SR_PHOTO
9 V_REF
10 S_REEL_FB
11 SF_PHOTO
12 T_REEL_FB
13 CHANGE
14 T_REEL_RSF
15 S_REEL_ET
16 S_REEL_RSF
17 TQU
18 T_REEL_ET
P2703 VJS3202B-008
1 REEL_SOL(H)
2 SOL_GND
3 GND
4 SF_PHOTO
5 SF_LED
6 GND
7 SR_LED
8 SR_PHOTO
J2701
P2704 TO SUPPLY MOTOR
15 VFG+
14 VFG-
13 FG+
12 M1
11 FG-
10 H1-
9 H1+
8 M2
7 VH+
6 H2-
5 H2+
4 M3
3 H3-
2 VH-
1 H3+
P2705 TO TAKE UP MOTOR
15 M2
14 H3-
13 H3+
12 M1
11 M3
10 H2-
9 VH-
8 H2+
7 VH+
6 H1-
5 H1+
4 VFG+
3 FG+
2 VFG-
1 FG-
IC2701 XRA6435S or BA6435S
IC2702 XRA6435S or BA6435S
VM M1 Pcl GND CS TL PcV VS EC ECR VH+ Vcc
M3 ATC M2 PF H3- H3+ H2- H2+ H1- H1+ R/S/F GND
MC14053BF IC2704
IC2703 LM358PS
IC2705 LM339NS
IC2706 LM358PS
Q2701 MS0601
QR2701 MRN1404
D2701 MA151K
D2702 MA151WK
D2703 MA151K
D2704 MA153
D2705 MA151K
D2706 MA151WK
D2707 MA151K
D2708 MA153
L2701 100U VL00460
L2702 100U VL00460
L2703 100U VL00460
L2704 100U VL00460
R2717 100
R2718 2700
R2719 8200
R2710 1800
R2711 10K
R2712 1000
R2713 33 (1/4W)
R2714 33(1/4W)
R2715 1(1/2W)
R2716 ERX12SJ1R0P
R2720 220
R2721 1000
R2722 2200
R2723 2200
R2724 220K
R2725 1000
R2726 1000
R2701 1K(G)
R2702 10K
R2703 10K
R2704 22K
R2705 12K
R2706 22K
R2707 10K
R2708 10K
R2709 1M
R2727 680
R2728 82K
R2729 10K
R2730 10K
R2731 1200
R2732 10K
R2733 1000
R2734 33 (1/4W)
R2735 33(1/4W)
R2736 0.47(1/2W)
R2737 33(1/4W)
R2738 1000
R2739 220
R2740 220K
R2741 1000
R2742 1000
R2743 22K
C2701 0.01(B)
C2702 25V47
C2703 6V47
C2704 0.033
C2705 0.56(V)
C2706 50V2R2
C2707 50V2R2
C2708 50V2R2
C2709 0.033
C2710 0.033
C2711 0.033
C2712 0.033
C2713 6V47
C2714 6V100
C2715 6V47
C2716 6V47
C2717 6V47
C2718 0.01(B)
C2719 25V47
C2720 6V47
C2721 0.033
C2722 0.56(V)
C2723 50V2R2
C2724 50V2R2
C2725 50V2R2
C2726 0.033
C2727 0.033
C2728 0.033
C2729 0.033
Ref No. 2700 Series.

FRONT (1) SCHEMATIC DIAGRAM (E10: Page CBA-4) 1/4


P6701
VJS2889A021
OSD(L)
OSD_CS
OSD_DAT
OSD_CLK
D_GND
VR_GND
HIFI_VR_REF
HIFI_CH2_VR
CH2_METER
HIFI_CH1_VR
CH1_METER
D_5V
D_GND
+_HEATER
-30V
-_HEATER
SDA_F
SCK_F
BACKUP_5V
OSD_CLK
OSD_DAT
D6702
MA4056
C6704
50V22
R6702
10K/J6
-31.0V
-28.6V
Q6701
2SB709A
D6703
MA701A
D6704
MA3300-L
C6705
50V22
C6703
50V22
R6701
1500/J14
-29.3V
+5V
R6810
47K/J6
D6741
MA153-TW
D6739
MA151K-TW
D6740
MA151K-TW
LED_SCN(0:3)
TO FRONT(2)
LED_SCN(0:3)
CH1
CH2
VR6701
VR6702
R6772
510/J6
R6773
510/J6
D6738 MA701A-TW
C6702
10V220
C6701
10V220
FROM FRONT(2)
KEY_IN(0:7)
KEY_IN(0:7)
R6752
R6753
R6754
R6755
R6756
R6757
R6758
R6759
47K/J6
CHKB1(0:3)
BACKUP_5V
TO FRONT(3)
ROM_CS
SEL_ROM
SEL_IO
SCK1
SO1
SI1
DIAL_IN(0:6)
R6703
4700/J6
R6710
10K/J6
R6711
10K/J6
C6707
0.1
IC6704
UPC3936
0V
0.8V
0.1V
4.8V
4.8V
0.8V
4.5V
C6708
0.01
R6709
560K/J6
R6705
560K/J6
R6706
680/J6
R6707
68K/J6
R6708
68K/J6
C6706
0.01
VSQ0651
VSQ0651
COM
VCC
R6712
R6713
R6714
R6715
R6716
C6709
0.01
IC6703
MN1382-U
OUT VDD VSS
5.1V
C6710
16V33
IC6702
MN1382-R
OUT VDD VSS
4.8V
BACKUP_5V
R6717
470/J6
C6712
16V33
4.1V
0V
R6718
10K/J6
C6711
220P
Q6702
MSD602-RT2
R6719
R6720
R6721
R6722
R6723
R6724
R6725
10K/J6
R6726
R6727
R6728
R6729
R6730
R6731
R6732
R6733
FUNCTION(0:3)
J6704
R6811
47K/J6
IC6701
UPD75236J029
P31/MD1
P30/MD0
P23/BUZ
P22/PCL
P21
P20/PTO0
P13/TI0
P12/INT2
P11/INT1
P10/INT0
P03/SI0/SB1
P02/SO0/SB0
P01/SCK0
P00/INT4
RESET
AVSS
AN7/P93
AN6/P92
AN5/P91
AN4/P90
AN3
AN2
AN1
T0
T1
T2
T3
T4
T5
T6
T7
T8
T9
PH3/T10/S15/P153
PH2/T11/S14/P152
PH1/T12/S13/P151
PH0/T13/S12/P150
T14/S11/P143
T15/S10/P142
VLOAD
VDD
S9/P141
S8/P140
S7/P133
S6/P132
S5/P131
S4/P130
GRID(0:15)
DP6701
VSL0313
F(-)
F(+)
R6812
47K/J6
R6749
47K/J6
R6750
1000/J6
SEGMENT(0:10)
R6736
3900/J6
C6715
100P
C6716
22P
X6701
VSX0140-A
C6717
22P
CHKB2(0:3)
R6741
R6742
R6743
R6744
47K/J6
D6707
D6708
D6709
D6710
MA152K-TW
+5V
L6701
120U
C6714
10V220
C6713
0.01
R6735
10K/J6
D6706
MA153-TW
D6705
MA153-TW
R6734
10K/J6
C6718
100P
R6737
R6738
R6739
R6740
R6745
R6746
R6747
R6748
TO FRONT(2)
K_S0
K_S1
K_S2
K_S3
LED_OUT(0:3)
TO FRONT(2)
LED_OUT(0:3)

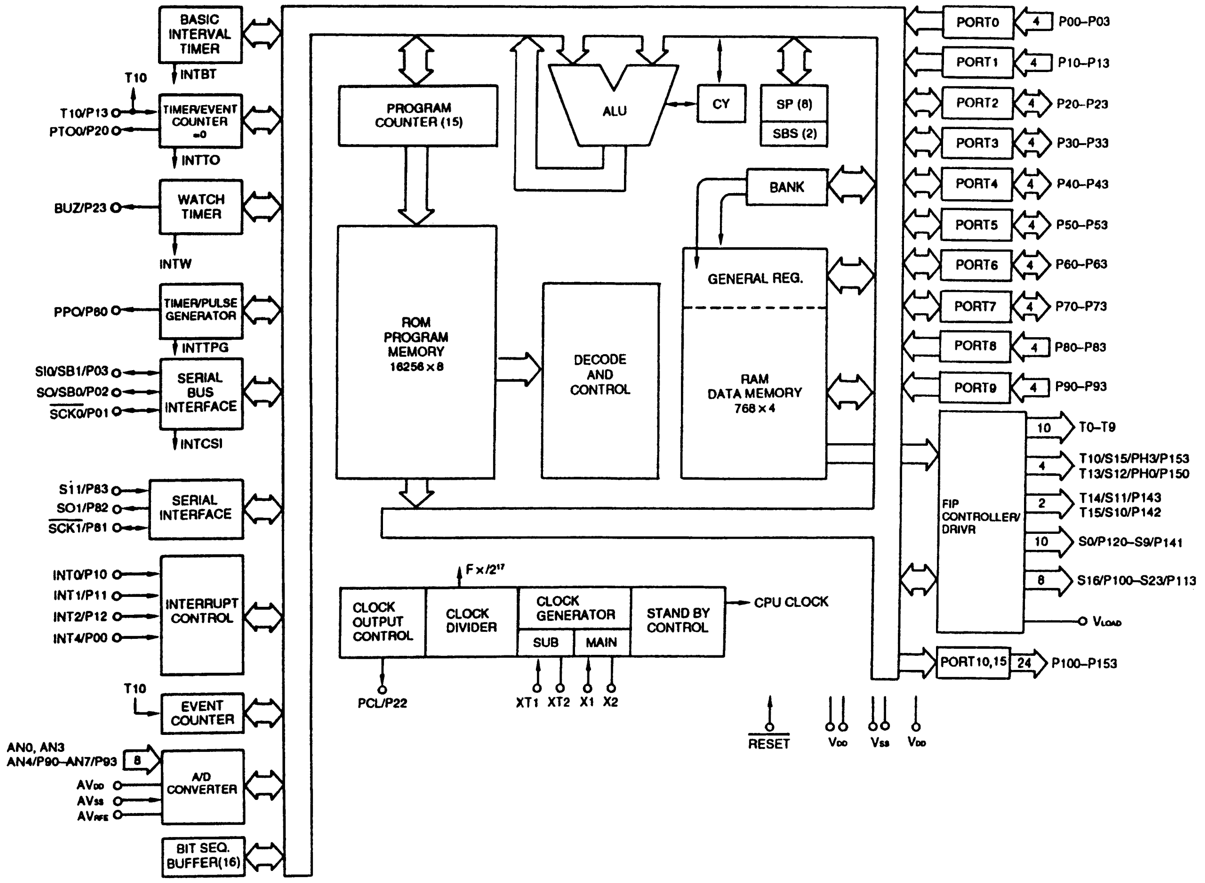
*=REFER TO THE COMPARISON CHART

Ref No.6700 Series.


8
9
10
11
12
13
14
15
16
D6739 MA151K-TW
D6740 MA151K-TW
LED_SCN(0:3)
TO FRONT(2)
LED_SCN(0:3)
KEY_IN(0:7)
R6752 47K/J6
R6753 47K/J6
R6754 47K/J6
R6755 47K/J6
R6756 47K/J6
R6757 47K/J6
R6758 47K/J6
R6759 47K/J6
BACKUP_5V
R6768 R6769 R6770 R6771 22K/J6
R6760 R6761 R6762 R6763 R6764 R6765 R6766 R6767 10K/J6
KEY_IN(0:7)
CHKB1(0:3)
TO FRONT(3)
ROM_CS
SEL_ROM
SEL_IO
SCK1
SO1
SI1
BACKUP_5V
C6709 0.01
R6719 10K/J6
R6720 10K/J6
R6721 10K/J6
R6722 10K/J6
C6710 16V33
R6723 10K/J6
R6724 10K/J6
R6725 10K/J6
IC6701 UPD75236J029
GRID(0:15)
DP6701 VSL0313
F(-)
F(+)
R6812 47K/J6
R6749 47K/J6
R6750 100K/J6
R6726 10K/J6
R6727 10K/J6
R6728 10K/J6
R6729 10K/J6
FUNCTION(0:3)
R6811 47K/J6
R6736 3900/J6
C6715 100P
C6716 22P
X6701 VSX0140-A
C6717 22P
CHKB2(0:3)
R6741 47K/J6
R6742 47K/J6
R6743 47K/J6
R6744 47K/J6
D6707 D6708 D6709 D6710 MA152K-TW
SEGMENT(0:10)
TO FRONT(2)
K_S0
K_S1
K_S2
K_S3
R6737 R6738 R6739 R6740 47K/J6
R6745 R6746 R6747 R6748 47K/J6
LED_OUT(0:3)
TO FRONT(2)
LED_OUT(0:3)
C6714 10V220
D6705 MA153-TW
C6718 100P

*=REFER TO THE COMPARISON CHART
Ref No.6700 Series.

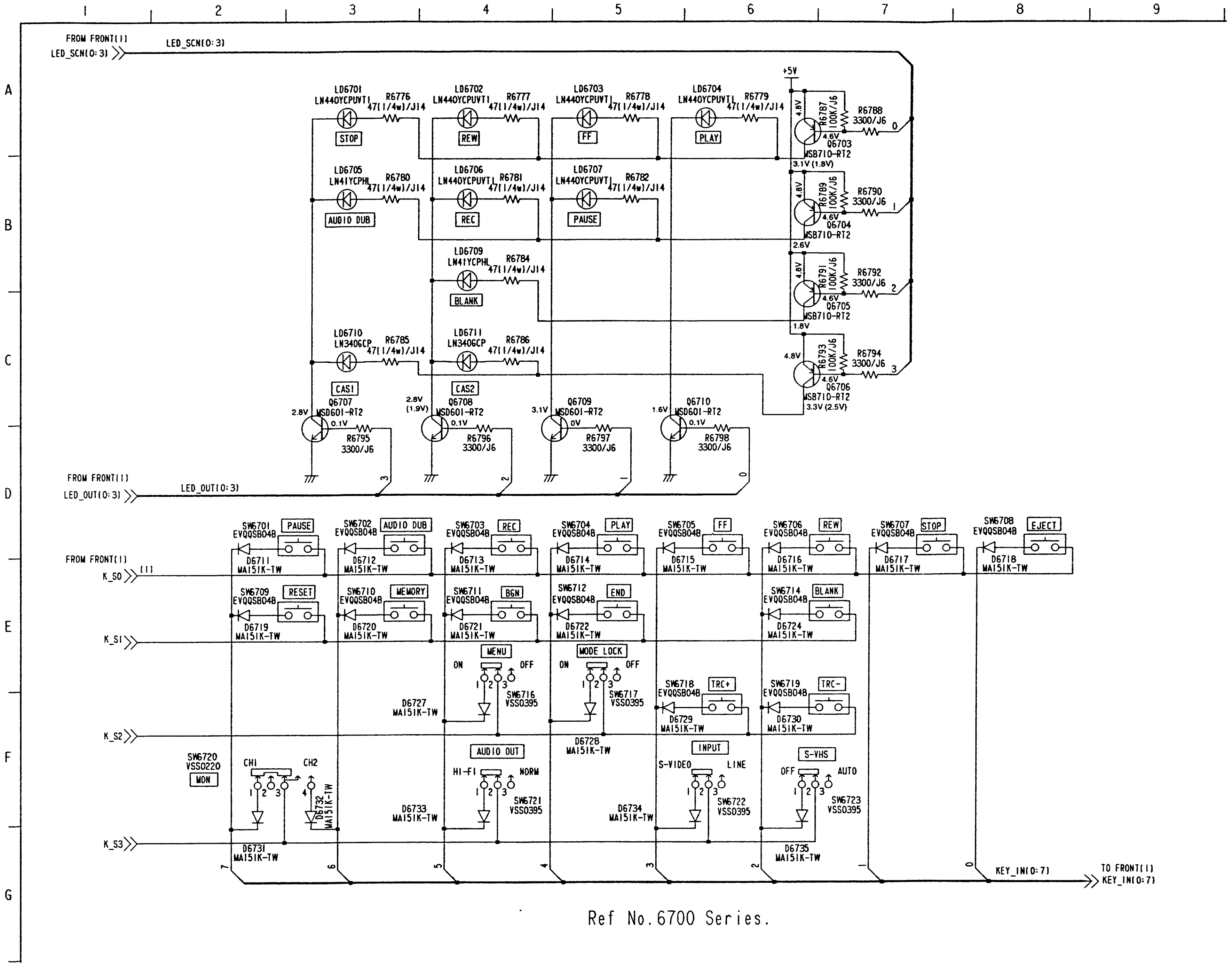
IC6701 (UPD75236J029)


BASIC INTERVAL TIMER
INTBT
T10
T10/P13
PTO0/P20
TIMER/EVENT COUNTER #0
INTT0
BUZ/P23
WATCH TIMER
INTW
PPO/P80
TIMER/PULSE GENERATOR
INTTPG
SI0/SB1/P03
SO/SB0/P02
SCK0/P01
SERIAL BUS INTERFACE
INTCSI
SI1/P83
SO1/P82
SCK1/P81
SERIAL INTERFACE
INT0/P10
INT1/P11
INT2/P12
INT4/P00
INTERRUPT CONTROL
T10
EVENT COUNTER
AN0, AN3
AN4/P90–AN7/P93
8
AVDD
AVSS
AVREF
A/D CONVERTER
BIT SEQ. BUFFER(16)
PROGRAM COUNTER (15)
ROM PROGRAM MEMORY 16256×8
DECODE AND CONTROL
ALU
CY
SP (8)
SBS (2)
BANK
GENERAL REG.
RAM DATA MEMORY 768×4
F×/2^17
CLOCK OUTPUT CONTROL
CLOCK DIVIDER
CLOCK GENERATOR
SUB
MAIN
STAND BY CONTROL
CPU CLOCK
PCL/P22
XT1 XT2 X1 X2
RESET
VDD VSS VDD
PORT0 4 P00–P03
PORT1 4 P10–P13
PORT2 4 P20–P23
PORT3 4 P30–P33
PORT4 4 P40–P43
PORT5 4 P50–P53
PORT6 4 P60–P63
PORT7 4 P70–P73
PORT8 4 P80–P83
PORT9 4 P90–P93
FIP CONTROLLER/DRIVR
10 T0–T9
4 T10/S15/PH3/P153 T13/S12/PH0/P150
2 T14/S11/P143 T15/S10/P142
10 S0/P120–S9/P141
8 S16/P100–S23/P113
VLOAD
PORT10,15 24 P100–P153

IC6701

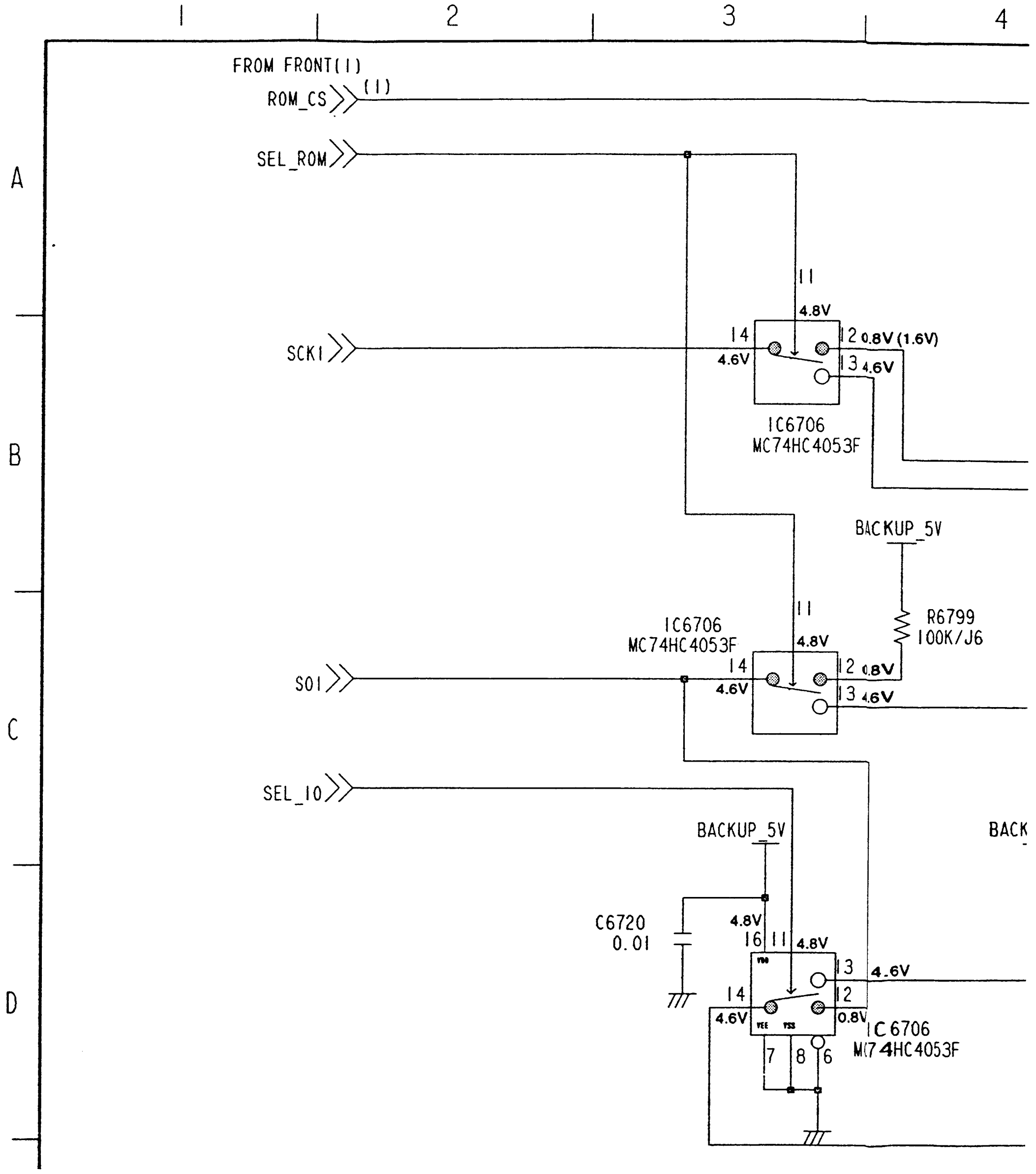
PIN No.	PLAY	REC	PIN No.	PLAY	REC	PIN No.	PLAY	REC
1	0.2V	0V	33	0V	0V	65	0V	0V
2	4.8V	4.8V	34	0V	0V	66	3.7V	3.7V
3	4.8V	4.8V	35	0V	0V	67	3.6V	3.6V
4	4.8V	4.8V	36	0V	0V	68	3.7V	3.7V
5	4.8V	4.8V	37	-23.0V	-23.0V	69	3.7V	3.7V
6	2.3V	2.3V	38	-23.0V	-23.0V	70	0V	0V
7	2.1V	2.1V	39	-23.3V	-23.3V	71	4.8V	4.8V
8	0V	0V	40	-24.0V	-24.0V	72	4.8V	4.8V
9	4.8V	4.8V	41	-23.7V	-23.7V	73	4.8V	4.8V
10	0V	0V	42	-23.0V	-23.0V	74	0V	0V
11	0V	0V	43	-23.0V	-23.0V	75	2.1V	2.1V
12	0V	0V	44	-23.0V	-23.0V	76	0V	0V
13	4.5V	2.3V	45	-23.0V	-23.0V	77	0V	0V
14	4.5V	1.2V	46	-23.2V	-23.2V	78	0V	0V
15	0V	1.0V	47	-23.2V	-23.2V	79	4.8V	4.8V
16	0V	0V	48	4.8V	4.8V	80	0V	0V
17	0V	0V	49	4.8V	4.8V	81	4.8V	4.8V
18	0V	0V	50	0.1V	0.1V	82	4.0V	4.0V
19	0V	0V	51	4.7V	4.7V	83	0.6V	0.6V
20	-8.0V	-8.0V	52	4.4V	3.9V	84	4.5V	4.5V
21	-14.6V	-10.0V	53	0V	0V	85	5.1V	5.1V
22	-10.7V	-8.0V	54	0V	0V	86	4.8V	4.8V
23	-10.9V	-10.9V	55	0V	0V	87	0V	0V
24	-10.0V	-10.0V	56	0V	0V	88	4.8V	4.8V
25	-10.0V	-15.0V	57	0V	0V	89	4.8V	4.8V
26	-17.5V	-16.0V	58	2.7V	2.7V	90	0V	0V
27	-25.8V	-26.2V	59	0V	0V	91	4.8V	4.8V
28	-18.7V	-18.7V	60	0V	0V	92	0V	0V
29	-8.9V	-8.9V	61	0V	0V	93	0V	0V
30	4.8V	4.8V	62	4.8V	4.8V	94	1.5V	0V
31	-26.0V	-26.0V	63	0V	0V			
32	-23.7V	-23.7V	64	4.8V	4.8V			

FRONT (2) SCHEMATIC DIAGRAM (E10: Page CBA-4) 2/4

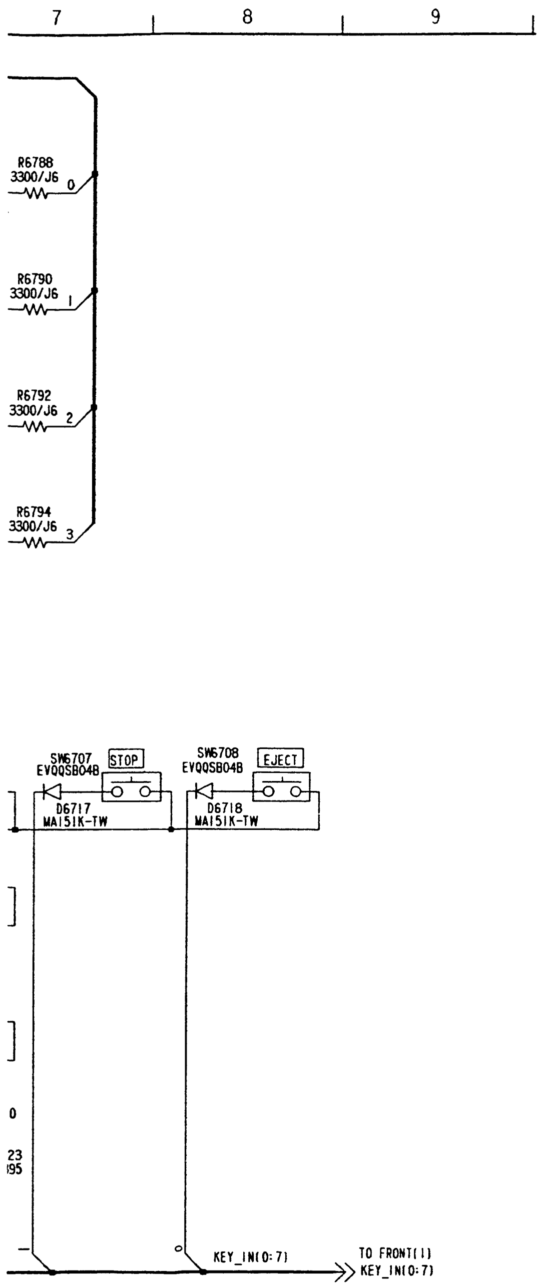

FROM FRONT(1)
LED_SCN(0:3)
LED_OUT(0:3)
K_S0
K_S1
K_S2
K_S3
+5V
LD6701 LN440YCPUVT1 R6776 47(1/4w)/J14 STOP
LD6702 LN440YCPUVT1 R6777 47(1/4w)/J14 REW
LD6703 LN440YCPUVT1 R6778 47(1/4w)/J14 FF
LD6704 LN440YCPUVT1 R6779 47(1/4w)/J14 PLAY
LD6705 LN41YCPHL R6780 47(1/4w)/J14 AUDIO DUB
LD6706 LN440YCPUVT1 R6781 47(1/4w)/J14 REC
LD6707 LN440YCPUVT1 R6782 47(1/4w)/J14 PAUSE
LD6709 LN41YCPHL R6784 47(1/4w)/J14 BLANK
LD6710 LN3406CP R6785 47(1/4w)/J14 CAS1
LD6711 LN3406CP R6786 47(1/4w)/J14 CAS2
Q6703 MSB710-RT2 R6787 100K/J6 R6788 3300/J6
Q6704 MSB710-RT2 R6789 100K/J6 R6790 3300/J6
Q6705 MSB710-RT2 R6791 100K/J6 R6792 3300/J6
Q6706 MSB710-RT2 R6793 100K/J6 R6794 3300/J6
Q6707 MSD601-RT2 R6795 3300/J6
Q6708 MSD601-RT2 R6796 3300/J6
Q6709 MSD601-RT2 R6797 3300/J6
Q6710 MSD601-RT2 R6798 3300/J6
SW6701 EVQQSB04B PAUSE D6711 MA151K-TW
SW6702 EVQQSB04B AUDIO DUB D6712 MA151K-TW
SW6703 EVQQSB04B REC D6713 MA151K-TW
SW6704 EVQQSB04B PLAY D6714 MA151K-TW
SW6705 EVQQSB04B FF D6715 MA151K-TW
SW6706 EVQQSB04B REW D6716 MA151K-TW
SW6707 EVQQSB04B STOP D6717 MA151K-TW
SW6708 EVQQSB04B EJECT D6718 MA151K-TW
SW6709 EVQQSB04B RESET D6719 MA151K-TW
SW6710 EVQQSB04B MEMORY D6720 MA151K-TW
SW6711 EVQQSB04B BGN D6721 MA151K-TW
SW6712 EVQQSB04B END D6722 MA151K-TW
SW6714 EVQQSB04B BLANK D6724 MA151K-TW
MENU SW6716 VSS0395 D6727 MA151K-TW
MODE LOCK SW6717 VSS0395 D6728 MA151K-TW
SW6718 EVQQSB04B TRC+ D6729 MA151K-TW
SW6719 EVQQSB04B TRC- D6730 MA151K-TW
SW6720 VSS0220 MON CH1 CH2 D6731 MA151K-TW D6732 MA151K-TW
AUDIO OUT HI-FI NORM SW6721 VSS0395 D6733 MA151K-TW
INPUT S-VIDEO LINE SW6722 VSS0395 D6734 MA151K-TW
S-VHS OFF AUTO SW6723 VSS0395 D6735 MA151K-TW
KEY_IN(0:7)
TO FRONT(1) KEY_IN(0:7)

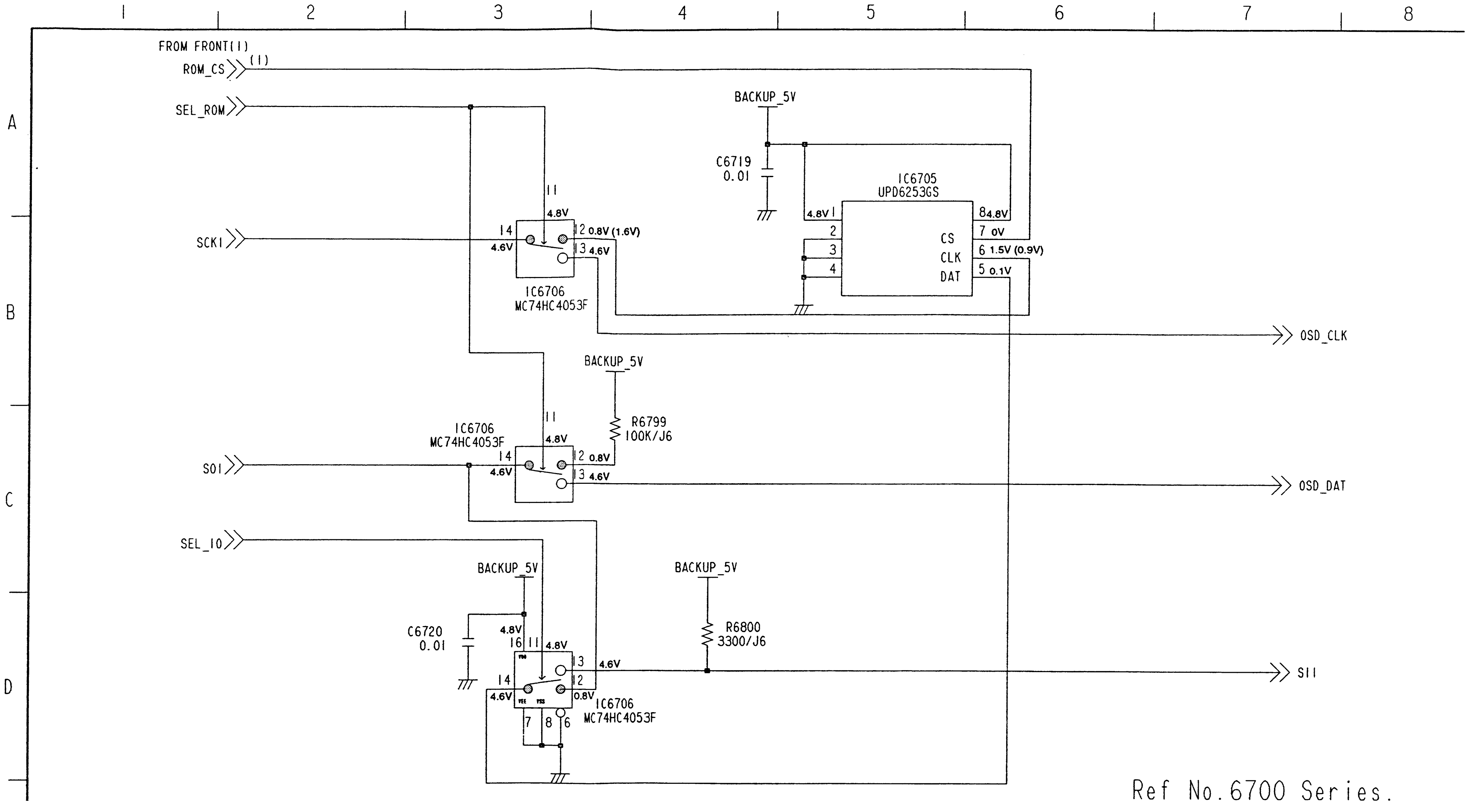
Ref No.6700 Series.

FRONT (3) SCHEMATIC DIAGRAM (E10: Page CBA-4) 3/4


FROM FRONT(1)
ROM_CS
SEL_ROM
SCK1
SO1
SEL_IO
IC6706 MC74HC4053F
BACKUP_5V
R6799 100K/J6
C6720 0.01
4.8V
4.6V
0.8V (1.6V)

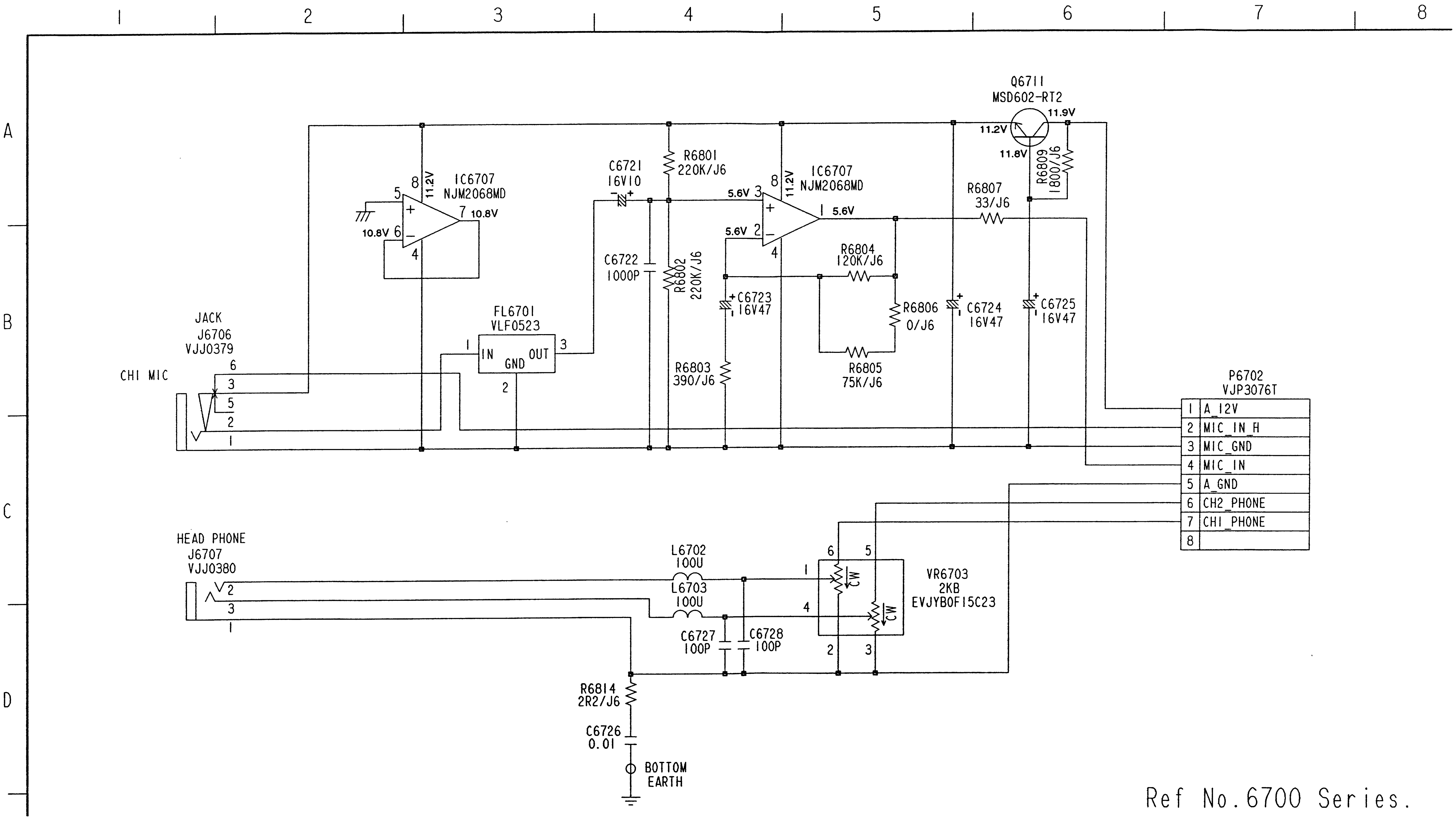
FRONT (3) SCHEMATIC DIAGRAM (E10: Page CBA-4) 3/4


7
8
9
R6788 3300/J6
R6790 3300/J6
R6792 3300/J6
R6794 3300/J6
SW6707 EVQQSB04B
STOP
D6717 MA151K-TW
SW6708 EVQQSB04B
EJECT
D6718 MA151K-TW
KEY_IN(0:7)
TO FRONT(1) KEY_IN(0:7)


1
2
3
4
5
6
7
8
A
B
C
D
FROM FRONT(1)
ROM_CS
(1)
SEL_ROM
SCK1
SO1
SEL_IO
BACKUP_5V
C6719 0.01
IC6705 UPD6253GS
CS
CLK
DAT
4.8V
0V
1.5V (0.9V)
0.1V
IC6706 MC74HC4053F
0.8V (1.6V)
4.6V
R6799 100K/J6
R6800 3300/J6
C6720 0.01
OSD_CLK
OSD_DAT
SI1

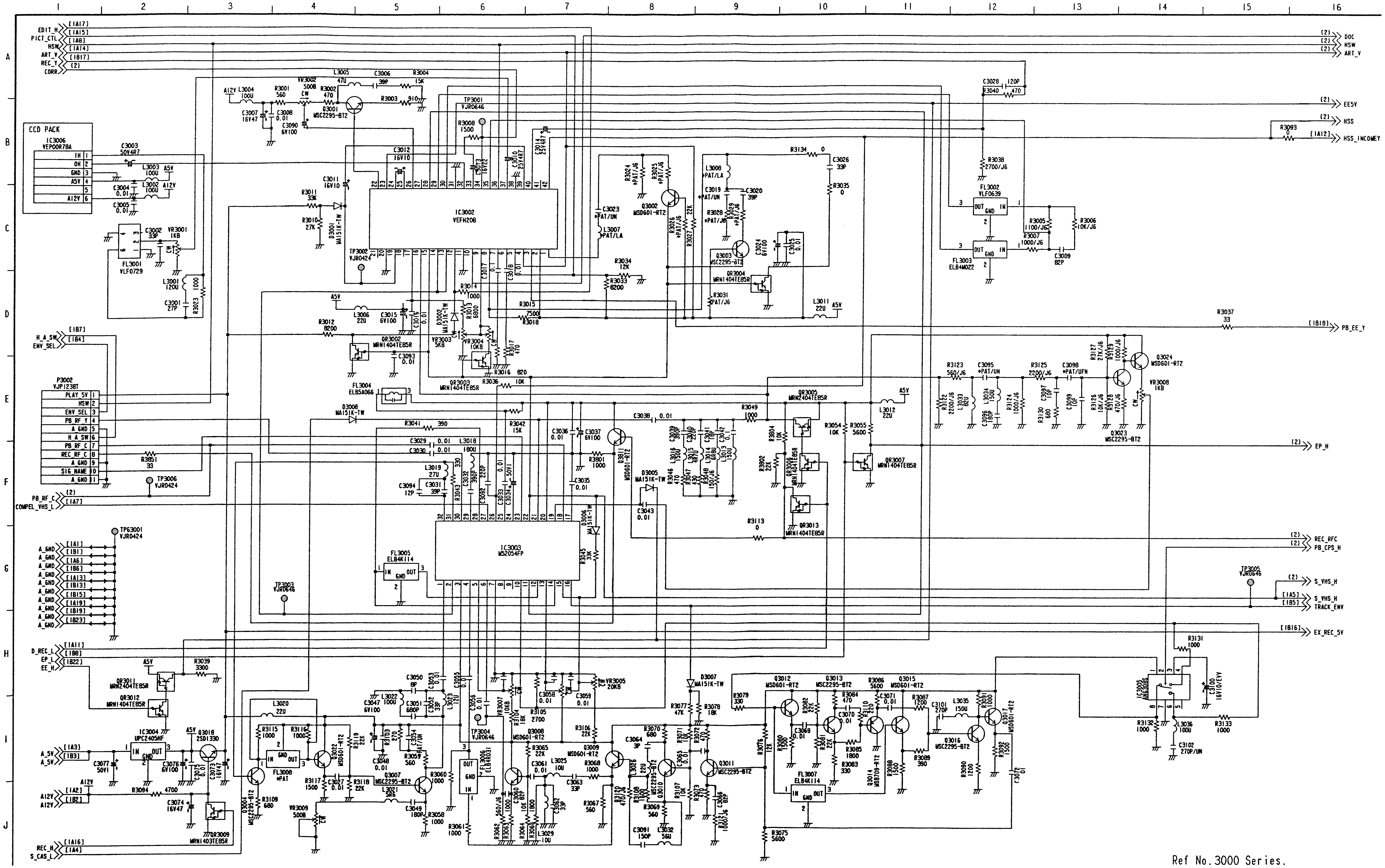
Ref No.6700 Series.

FRONT (4) SCHEMATIC DIAGRAM (E10: Page CBA-4) 4/4


1
2
3
4
5
6
7
8
A
B
C
D
Q6711
MSD602-RT2
11.9V
11.2V
11.8V
R6809
180/J6
IC6707
NJM2068MD
11.2V
10.8V
C6721
16V10
R6801
220K/J6
5.6V
R6807
33/J6
C6722
1000P
R6802
220K/J6
R6804
120K/J6
C6723
16V47
R6806
0/J6
C6724
16V47
C6725
16V47
FL6701
VLF0523
IN
OUT
GND
JACK
J6706
VJJ0379
CHI MIC
R6803
390/J6
R6805
75K/J6
P6702
VJP3076T
A_12V
MIC_IN_H
MIC_GND
MIC_IN
A_GND
CH2_PHONE
CHI_PHONE
HEAD PHONE
J6707
VJJ0380
L6702
100U
L6703
100U
C6727
100P
C6728
100P
VR6703
2KB
EVJYB0F15C23
CW
R6814
2R2/J6
C6726
0.01
BOTTOM
EARTH

Ref No.6700 Series.

VIDEO (1) SCHEMATIC DIAGRAM (E5: Page CBA-7) 1/2


EDIT_H
PICT_CTL
HSW
ART_V
REC_Y
CORR
CCD PACK
IC3006
VEP00R78A
IH
OH
GND
A5V
A12V
FL3001
VLF0729
IC3002
VEFH208
IC3003
M52054FP
Q3001
MSC2295-BT2
Q3002
MSD601-RT2
Q3003
MSC2295-BT2
QR3004
MRN1404TE85R
FL3002
VLF0639
FL3003
ELB4M022
Q3024
MSD601-RT2
Q3023
MSC2295-BT2
VR3008
1KB
QR3005
MRN2404TE85R
QR3006
MRN1404TE85R
QR3007
MRN1404TE85R
QR3013
MRN1404TE85R
FL3004
ELB5A066
FL3005
ELB4K114
P3002
VJP1238T
PLAY_5V
HSW
ENV_SEL
PB_RF_Y
A_GND
H_A_SW
PB_RF_C
REC_RF_C
A_GND
SIG NAME
A_GND
H_A_SW
ENV_SEL
PB_RF_C
COMPEL_VHS_L
TP3001
VJR0646
TP3002
VJR0424
TP3003
VJR0646
TP3004
VJR0646
TP3005
VJR0646
TP3006
VJR0424
TP63001
VJR0424
A_GND
D_REC_L
EP_L
EE_H
QR3011
MRN2404TE85R
QR3012
MRN1404TE85R
IC3004
UPC2405HF
Q3018
2SD1330
QR3009
MRN1403TE85R
A_5V
A12V
REC_H
S_CAS_L
FL3008
Q3022
MSD601-RT2
Q3007
MSC2295-BT2
FL3006
Q3008
MSD601-RT2
Q3009
MSD601-RT2
Q3010
MSC2295-BT2
Q3011
MSC2295-BT2
D3007
MA151K-TW
Q3012
MSD601-RT2
Q3013
MSC2295-BT2
Q3014
MSB709-RT2
Q3015
MSD601-RT2
Q3016
MSC2295-BT2
Q3017
MSD601-RT2
FL3007
ELB4K114
IC3005
VR3005
20KB
VR3009
500B
DOC
HSW
ART_V
EE5Y
HSS
HSS_INCOMEY
PB_EE_Y
EP_H
REC_RFC
PB_CPS_H
S_VHS_H
S_VHS_H
TRACK_ENV
EX_REC_5V

Ref No. 3000 Series.

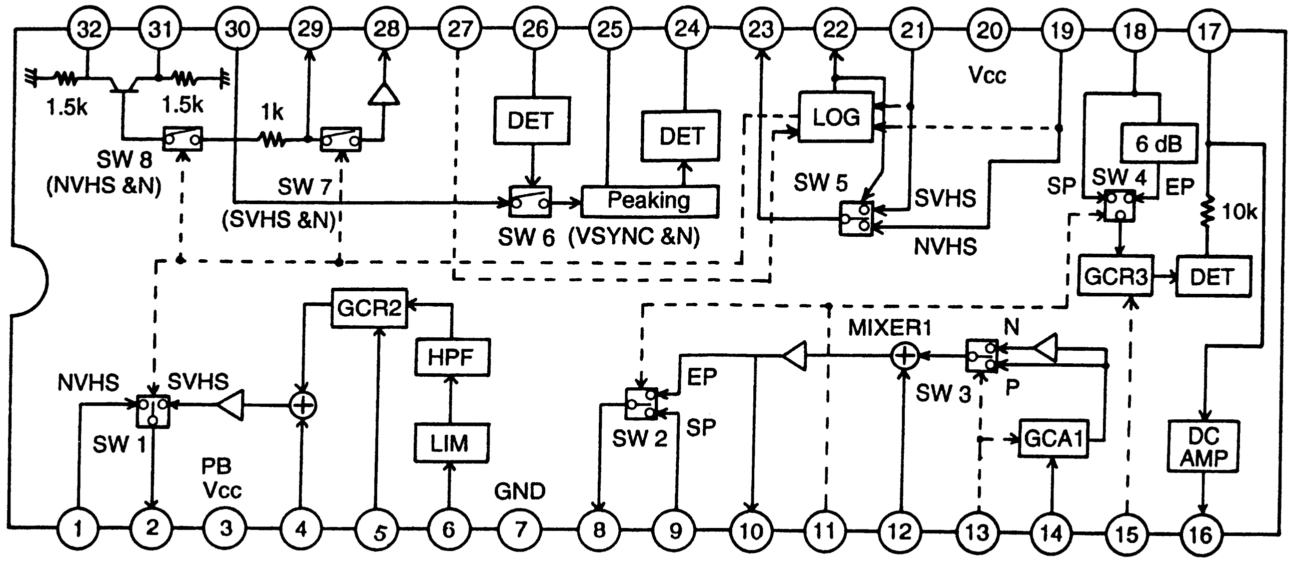
VIDEO 1 ICs DC VOLTAGE

REF NO.	IC3002															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	2.9	4.8	2.3	0	2.8	1.9	1.3	1.7	1.0	4.8	0	2.3	2.5	2.5	0.2	4.8
REC	2.9	4.8	2.3	0	2.8	1.9	4.3	1.7	1.0	1.2	0	0	0	0	0.2	3.4
REF NO.	IC3002															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	4.8	3.0	1.8	0	4.8	3.2	0.5	1.2	2.9	2.8	4.8	0	1.8	1.8	0	1.4
REC	4.8	3.0	1.8	0	2.1	3.2	4.9	1.2	2.9	2.8	4.8	0	1.8	1.8	0	1.4
REF NO.	IC3002															
PIN NO.	33	34	35	36	37	38	39	40	41	42						
PLAY	2.7	2.0	1.7	4.7	2.1	0	2.3	3.3	0.3	0.4						
REC	2.7	2.0	2.0	4.7	2.1	0	2.3	2.8	0.3	0.4						
REF NO.	IC3003															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	3.9	2.5	0	0	0.7	3.2	0	1.3	2.8	1.9	0	2.5	2.6	2.5	1.4	2.0
REC	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC3003															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	3.1	2.8	1.0	4.9	4.5	0.1	0.3	2.7	3.9	0.4	4.8	2.5	1.9	3.3	1.2	3.4
REC	0	0	2.4	4.9	4.5	0	1.6	2.5	4.3	0.4	4.8	0	0	0	0	0
REF NO.	IC3004															
PIN NO.	1	2	3													
PLAY	5.7	0	4.9													
REC	5.7	0	4.9													

VIDEO 1 TRANSISTORs DC VOLTAGE

REF NO.	Q3001			Q3002			Q3003			Q3004			Q3005		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.5	7.6	3.2	0.1	0.1	0.8	0.1	0.2	0.8	0.5	4.2	1.2	0	0	0.4
REC	2.5	7.6	3.2	0.1	0.1	0.8	0.1	0.2	0.8	0	0.1	0	0	0	0.4
REF NO.	Q3006			Q3007			Q3008			Q3009			Q3010		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	0.4	1.4	3.8	2.1	0.8	4.7	1.4	0.7	4.7	1.3	1.4	2.9	2.1
REC	0	0	0.4	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0
REF NO.	Q3011			Q3012			Q3013			Q3014			Q3015		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.6	4.0	1.4	1.3	4.7	1.9	1.1	3.1	1.8	1.7	0	1.1	1.3	4.7	1.9
REC	0	0.1	0	0	0.1	0	0	0.1	0	0.1	0	0	0	0.1	0
REF NO.	Q3016			Q3017			Q3018			Q3022			Q3811		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.5	3.3	1.3	2.7	4.7	3.3	4.8	4.9	5.5	3.5	4.7	4.2	0	4.9	0
REC	0	0.1	0	0	0.1	0.1	0.1	4.9	0	0	0.1	0.1	2.6	4.9	3.2
REF NO.	QR3002			QR3003			QR3004			QR3005			QR3006		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	2.9	0.1	0	1.0	0.1	0	0.2	0.2	4.9	4.8	0	0	0	4.8
REC	0	0.1	0.1	0	1.0	0.1	0	0.2	0.2	4.9	3.4	4.8	0	4.8	0
REF NO.	QR3007			QR3009			QR3010			QR3011			QR3012		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	4.0	0	5.5	0	0	0	5.0	4.9	0.5	4.9	0	4.9	0
REC	0	0	4.0	0	0	4.8	0	0	5.0	4.9	4.9	0	0	0	4.7
REF NO.	QR3013														
	E	C	B												
PLAY	0	0	4.8												
REC	0	3.2	0												

IC3003 (M52054FP)


32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
1.5k
1.5k
1k
SW 8
(NVHS &N)
SW 7
(SVHS &N)
DET
DET
Peaking
SW 6 (VSYNC &N)
LOG
SW 5
SVHS
NVHS
Vcc
SP
SW 4
EP
6 dB
10k
GCR3
DET
GCR2
HPF
LIM
NVHS
SVHS
SW 1
PB
Vcc
GND
EP
SP
SW 2
MIXER1
N
SW 3
P
GCA1
DC
AMP
1
2
3
4
5
6
7
8
9
10
11
12
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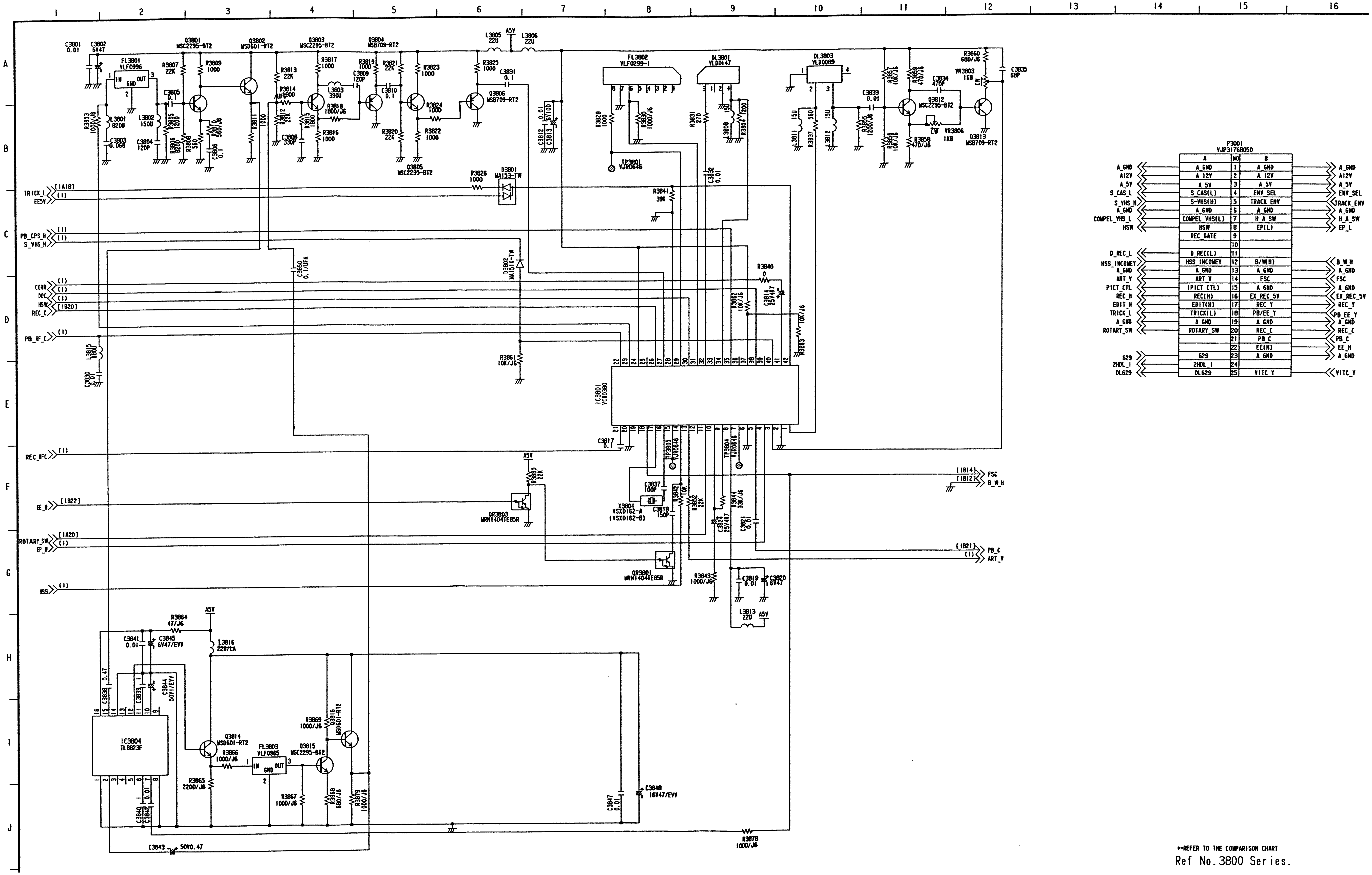
14
15
16

VIDEO (1) SCHEMATIC DIAGRAM (E5: Page CBA-7) 2/2


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
C3801 0.01
C3802 6V47
FL3801 VLF0996
IN GND OUT
Q3801 MSC2295-BT2
Q3802 MSD601-RT2
Q3803 MSC2295-BT2
Q3804 MSB709-RT2
Q3805 MSC2295-BT2
Q3806 MSB709-RT2
L3805 22U
A5V
L3806 22U
R3807 22K
R3809 1000
R3813 22K
R3814 1800
R3817 1000
R3819 1000
R3821 22K
R3823 1000
R3825 1000
C3831 0.1
C3805 0.1
C3809 120P
C3810 0.1
L3803 390U
R3818 1800/J6
R3824 1000
R3853 1000/J6
L3801 820U
L3802 150U
R3805 1200
R3806 8200
R3808 560
R3810 560/J6
C3803 0.068
C3804 120P
C3806 0.1
R3811 1000
R3812 22K
R3815 1800
C3808 330P
R3816 1000
R3820 22K
R3822 1000
R3826 1000
D3801 MA153-TW
C3812 0.01
C3813 6V100
FL3802 VLF0299-1
DL3801 VLD0147
DL3803 VLD0089
R3828 1000
R3830 1000/J6
TP3801 VJR0646
R3831 270
L3808 15U
R3854 1200
C3832 0.01
R3841 39K
L3811 15U
R3837 560
L3812 15U
C3833 0.01
R3855 1200/J6
R3857 10K/J6
R3856 10K/J6
R3859 470/J6
R3858 470/J6
C3834 470P
Q3812 MSC2295-BT2
VR3806 1KB
CW
R3860 680/J6
VR3803 1KB
C3835 68P
Q3813 MSB709-RT2
TRICK_L [1A18]
EE5V (1)
PB_CPS_H (1)
S_VHS_H (1)
C3850 0.1/UFN
D3802 MA151K-TW
CORR (1)
DOC (1)
HSW (1)
REC_C [1B20]
PB_RF_C (1)
L3815 680U
C3830 0.01
R3861 10K/J6
R3840 0
R3862 10K/J6
C3814 25V4R7
R3863 10K/J6
IC3801 VCR0380
C3817 0.1
TP3805 VJR0646
TP3804 VJR0646
REC_RFC (1)
A5V
R3880 22K
EE_H [1B22]
QR3803 MRN1404TE85R
C3837 100P
X3801 VSX0162-A (VSX0162-B)
C3818 150P
R3842 10K
R3852 22K
C3824 25V4R7
R3844 33K/J6
C3821 0.01
[1B14] FSC
[1B12] B_W_H
ROTARY_SW [1A20]
EP_H (1)
QR3801 MRN1404TE85R
[1B21] PB_C
(1) ART_Y
HSS (1)
R3843 1000/J6
C3819 0.01
C3820 6V47
L3813 22U
A5V
R3864 47/J6
A5V
C3841 0.01
C3845 6V47/EVV
L3816 220/LA
C3838 0.47
C3839 1
C3844 50V1/EVV
IC3804 TL8823F
Q3814 MSD601-RT2
R3866 1000/J6
FL3803 VLF0965
Q3815 MSC2295-BT2
R3869 1000/J6
Q3816 MSD601-RT2
R3865 2200/J6
R3867 1000/J6
R3868 680/J6
R3879 1000/J6
C3840 1
C3842 0.01
C3847 0.01
C3848 16V47/EVV
C3843 50V0.47
R3878 1000/J6
P3001
VJP3176B050
A | NO | B
A_GND | 1 | A_GND
A12V | 2 | A12V
A_5V | 3 | A_5V
S_CAS(L) | 4 | ENV_SEL
S-VHS(H) | 5 | TRACK_ENV
A_GND | 6 | A_GND
COMPEL_VHS(L) | 7 | H_A_SW
HSW | 8 | EP(L)
REC_GATE | 9 |
 | 10 |
D_REC(L) | 11 |
HSS_INCOMEY | 12 | B/W(H)
A_GND | 13 | A_GND
ART_Y | 14 | FSC
(PICT_CTL) | 15 | A_GND
REC(H) | 16 | EX_REC_5V
EDIT(H) | 17 | REC_Y
TRICK(L) | 18 | PB/EE_Y
A_GND | 19 | A_GND
ROTARY_SW | 20 | REC_C
 | 21 | PB_C
 | 22 | EE(H)
629 | 23 | A_GND
2HDL_I | 24 |
DL629 | 25 | VITC_Y
A_GND
A12V
A_5V
S_CAS_L
S_VHS_H
A_GND
COMPEL_VHS_L
HSW
D_REC_L
HSS_INCOMEY
A_GND
ART_Y
PICT_CTL
REC_H
EDIT_H
TRICK_L
A_GND
ROTARY_SW
629
2HDL_I
DL629
A_GND
A12V
A_5V
ENV_SEL
TRACK_ENV
A_GND
H_A_SW
EP_L
B_W_H
A_GND
FSC
A_GND
EX_REC_5V
REC_Y
PB_EE_Y
A_GND
REC_C
PB_C
EE_H
A_GND
VITC_Y

**REFER TO THE COMPARISON CHART

Ref No.3800 Series.

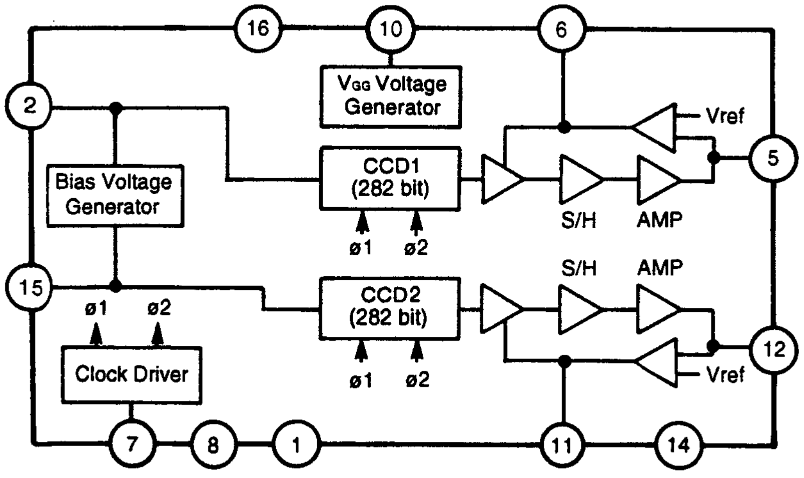
VIDEO 1 ICs DC VOLTAGE CHART (Ref. No 3800 Series)

REF NO.	IC3801															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	3.0	0.5	0	2.0	0	2.3	4.8	3.0	3.0	3.4	0.3	0.8	1.2	3.5	3.8
REC	0	3.2	0.5	0	4.2	0	4.1	4.8	3.0	3.0	4.7	0.3	0.8	1.2	3.5	3.8
REF NO.	IC3801															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	1.7	0	0	2.5	2.1	0	4.6	0	1.8	2.1	0	2.1	4.7	0	0
REC	0	1.7	0	0	2.0	0	0	4.6	0	1.8	2.1	0	1.8	4.7	0	0
REF NO.	IC3801															
PIN NO.	33	34	35	36	37	38	39	40	41	42						
PLAY	3.1	0.5	2.4	2.9	3.2	4.8	2.4	1.3	2.4	2.0						
REC	3.4	0.5	4.1	3.2	2.8	1.2	3.9	1.3	3.9	4.3						

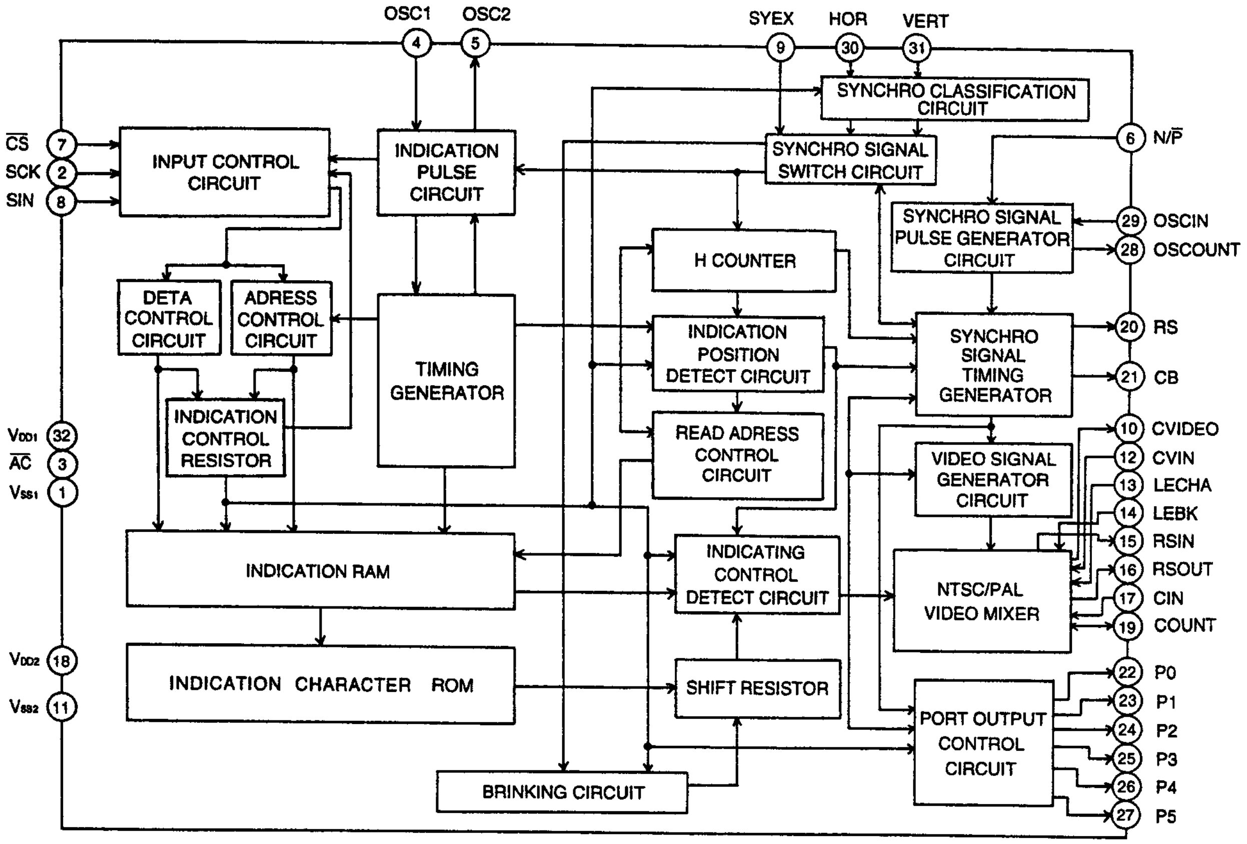
VIDEO 1 TRANSISTORs DC VOLTAGE CHART (Ref. No 3800 Series)

REF NO.	Q3801			Q3802			Q3803			Q3805			Q3806		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.4	3.9	1.2	3.2	4.8	3.9	1.4	3.3	2.2	1.5	3.3	2.2	2.1	0	1.5
REC	0.4	3.9	1.2	3.2	4.8	3.9	1.4	3.3	2.2	1.5	3.3	2.2	2.1	0	1.5
REF NO.	Q3807			Q3808			Q3809			QR3801			QR3802		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.5	0	0	0.5	0	0	0.5	0	0	0	0	4.8	0	0	4.7
REC	0.5	0	0	0.5	0	0	0.5	0	0	0	0.5	0.1	0	0	4.7

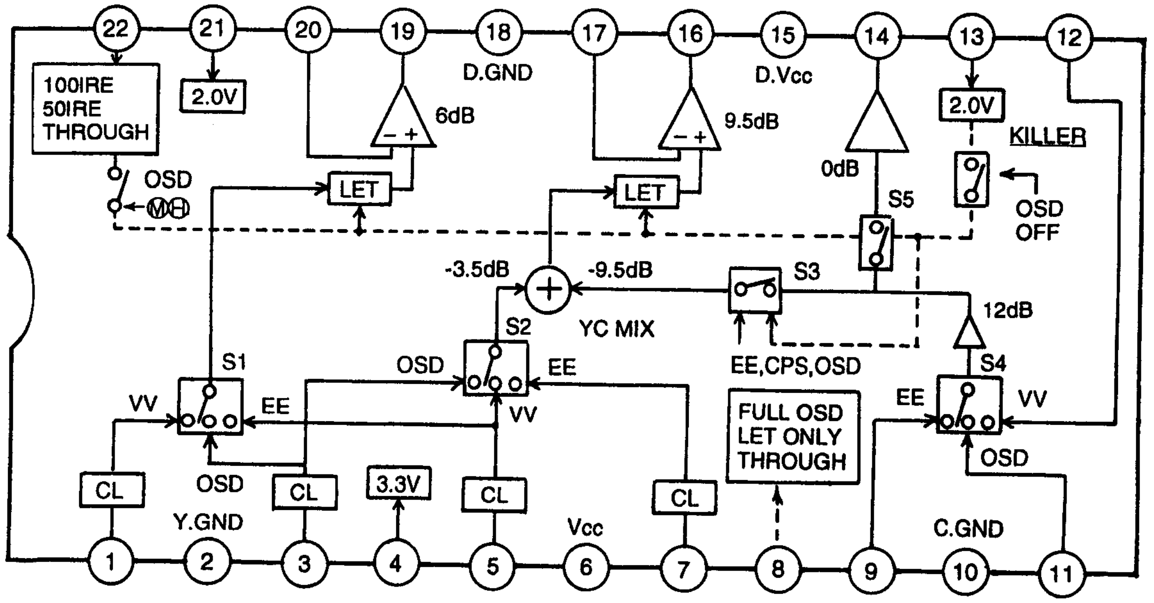
IC3804 (TL8823F)


16
10
6
2
VGG Voltage Generator
Vref
5
Bias Voltage Generator
CCD1 (282 bit)
ø1 ø2
S/H
AMP
15
S/H
AMP
CCD2 (282 bit)
ø1 ø2
Clock Driver
ø1 ø2
12
Vref
7
8
1
11
14

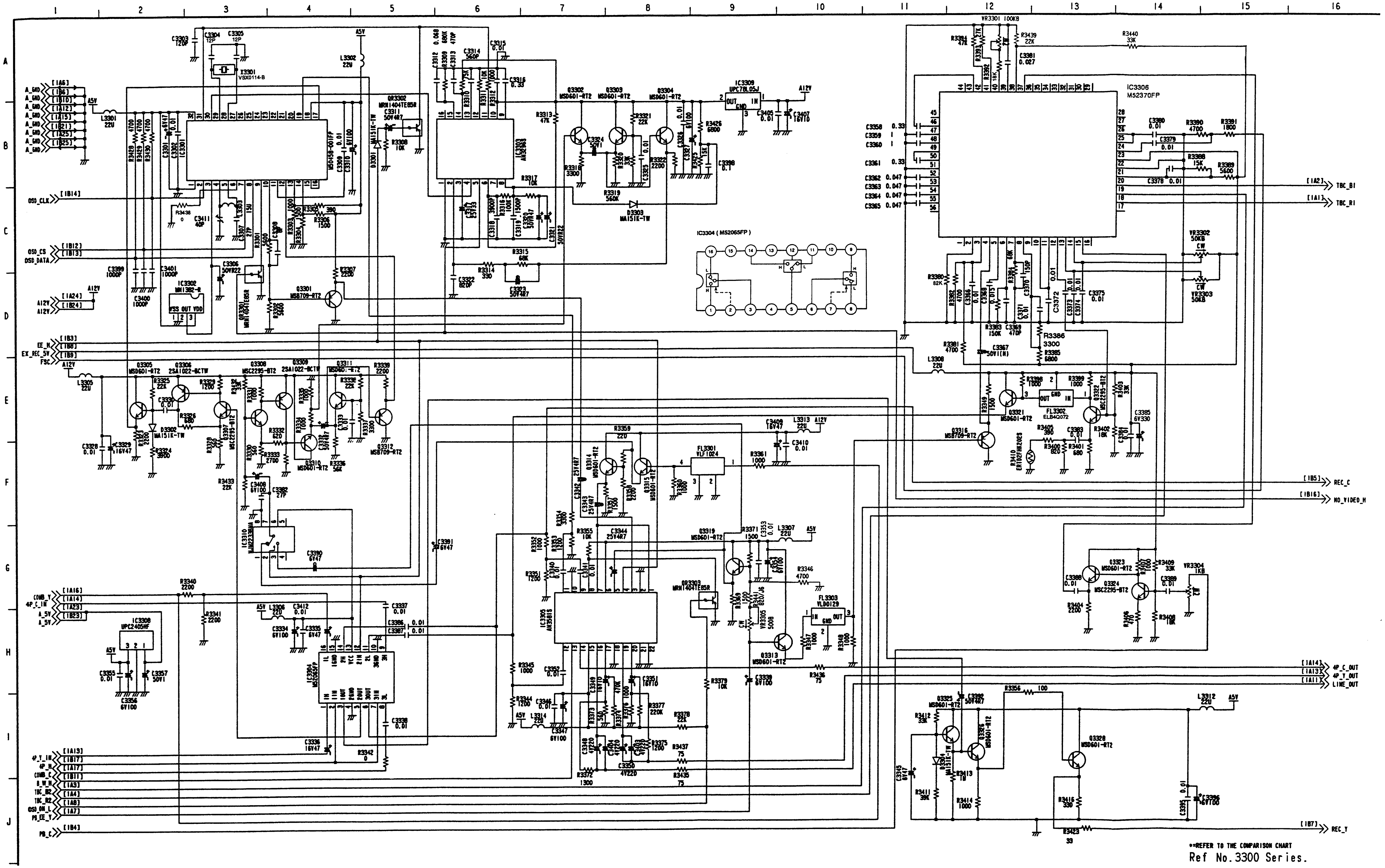
IC3301 (M50458-001FP)


OSC1
OSC2
SYEX
HOR
VERT
4
5
9
30
31
SYNCHRO CLASSIFICATION CIRCUIT
SYNCHRO SIGNAL SWITCH CIRCUIT
6
N/P̄
C̄S̄ 7
SCK 2
SIN 8
INPUT CONTROL CIRCUIT
INDICATION PULSE CIRCUIT
SYNCHRO SIGNAL PULSE GENERATOR CIRCUIT
29 OSCIN
28 OSCOUNT
H COUNTER
DETA CONTROL CIRCUIT
ADRESS CONTROL CIRCUIT
TIMING GENERATOR
INDICATION POSITION DETECT CIRCUIT
SYNCHRO SIGNAL TIMING GENERATOR
20 RS
21 CB
INDICATION CONTROL RESISTOR
Vᴅᴅ1 32
ĀC̄ 3
Vss1 1
READ ADRESS CONTROL CIRCUIT
VIDEO SIGNAL GENERATOR CIRCUIT
10 CVIDEO
12 CVIN
13 LECHA
14 LEBK
15 RSIN
16 RSOUT
17 CIN
19 COUNT
INDICATION RAM
INDICATING CONTROL DETECT CIRCUIT
NTSC/PAL VIDEO MIXER
Vᴅᴅ2 18
Vss2 11
INDICATION CHARACTER ROM
SHIFT RESISTOR
PORT OUTPUT CONTROL CIRCUIT
22 P0
23 P1
24 P2
25 P3
26 P4
27 P5
BRINKING CIRCUIT

IC3305 (AN3581N)


22
21
20
19
18
17
16
15
14
13
12
100IRE
50IRE
THROUGH
2.0V
6dB
D.GND
9.5dB
D.Vcc
0dB
2.0V
KILLER
OSD
MH
LET
LET
S5
OSD
OFF
-3.5dB
-9.5dB
S3
12dB
S2
YC MIX
S1
OSD
EE
EE,CPS,OSD
S4
VV
EE
VV
EE
VV
FULL OSD
LET ONLY
THROUGH
OSD
CL
OSD
Y.GND
CL
3.3V
CL
Vcc
CL
C.GND
1
2
3
4
5
6
7
8
9
10
11

VIDEO (2) SCHEMATIC DIAGRAM (E6:Page CBA-8)


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
A_GND
[1A6]
[1B6]
[1B10]
[1A12]
[1A15]
[1B21]
[1A25]
[1B25]
A5V
L3301 22U
OSD_CLK
[1B14]
OSD_CS
[1B12]
OSD_DATA
[1B13]
A12V
[1A24]
[1B24]
EE_H
[1B3]
[1B8]
EX_REC_5V
[1B9]
FSC
X3301 VSX0114-B
C3303 120P
C3304 12P
C3305 12P
IC3301 M50458-001FP
IC3302 MM1382-R
VSS OUT VDD
L3302 22U
QR3302 MRN1404TE85R
C3311 50V4R7
R3308 10K
D3301 MA151K-TW
IC3303 AN2810S
C3314 560P
C3315 0.01
C3316 0.33
Q3302 MSD601-RT2
Q3303 MSD601-RT2
Q3304 MSD601-RT2
R3313 47K
R3321 22K
R3319 560K
D3303 MA151K-TW
IC3309 UPC78L05J
OUT IN GND
A12V
R3426 6800
C3398 0.1
IC3304 (M52065FP)
VR3301 100KB
R3394 47K
R3439 22K
R3440 33K
C3381 0.027
IC3306 M52370FP
R3390 4700
R3391 1800
R3388 15K
R3389 5600
[1A2] TBC_BI
[1A1] TBC_RI
VR3302 50KB
VR3303 50KB
CW
Q3301 MSB709-RT2
R3307 2200
QR3301 MRN1404TE85R
Q3305 MSD601-RT2
Q3306 2SA1022-BCTW
Q3308 MSC2295-BT2
Q3309 2SA1022-BCTW
Q3311 MSD601-RT2
R3339 2200
L3305 22U
D3302 MA151K-TW
Q3310 MSD601-RT2
Q3312 MSB709-RT2
IC3310 NJM2233BM
R3433 22K
C3408 6V100
C3382 27P
C3390 6V47
C3391 6V47
Q3314 MSD601-RT2
Q3315 MSD601-RT2
R3359 220
FL3301 VLF1024
C3409 16V47
L3313 22U
R3361 1000
FL3302 ELB4Q072
OUT GND IN
Q3321 MSD601-RT2
Q3322 MSC2295-BT2
Q3316 MSB709-RT2
C3385 6V330
[1B5] REC_C
[1B16] NO_VIDEO_H
Q3319 MSD601-RT2
L3307 22U
A5V
R3346 4700
QR3303 MRN1404TE85R
IC3305 AN3581S
VR3305 500B
FL3303 VLD0129
Q3313 MSD601-RT2
Q3323 MSD601-RT2
Q3324 MSC2295-BT2
VR3304 1KB
COMB_Y
[1A16]
[1A14]
4P_C_IN
[1A23]
A_5V
[1B23]
R3340 2200
R3341 2200
IC3308 UPC2405HF
L3306 22U
IC3307 M52055FP
C3386 0.01
C3387 0.01
[1A14] 4P_C_OUT
[1A13] 4P_Y_OUT
[1A11] LINE_OUT
L3314 22U
R3379 10K
R3436 75
R3437 75
R3435 75
R3356 100
L3312 22U
Q3325 MSD601-RT2
Q3326 MSD601-RT2
Q3328 MSD601-RT2
D3304 MA151K-TW
4P_Y_IN
[1A13]
4P_H
[1B17]
[1A17]
COMB_C
[1B11]
B_W_H
[1A3]
TBC_R2
[1A4]
TBC_B2
[1A8]
OSD_ON_L
[1A7]
PB_EE_Y
PB_C
[1B4]
[1B7] REC_Y
R3423 33
**=REFER TO THE COMPARISON CHART
Ref No.3300 Series.

VID

VID

16

> TBC_BI

> TBC_RI

> REC_C

> NO_VIDEO_H

> 4P_C_OUT
> 4P_Y_OUT
> LINE_OUT

> REC_Y

VIDEO 2 ICs DC VOLTAGE CHART

REF NO.	IC3301															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	4.7	0	2.2	2.1	4.8	0	0.1	4.8	2.6	0	0	0	2.3	1.9	1.9
REC	0	4.7	0	2.2	2.1	4.8	4.1	0.1	4.8	2.6	0	2.6	3.4	2.3	1.9	1.9
REF NO.	IC3301															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	0	1.7	0.3	0.3	0	0	0	0	0	0	2.2	2.2	3.4	4.8	4.9
REC	1.8	4.9	1.7	0.7	0.7	0	0	0	0	0	0	2.2	2.2	3.4	4.8	4.9
REF NO.	IC3302															
PIN NO.	1	2	3													
PLAY	0	4.9	4.9													
REC	0	4.9	4.9													
REF NO.	IC3303															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	3.3	4.1	3.4	0.1	2.9	0	2.9	2.2	5.0	4.8	0.6	0	1.3	3.7	4.1
REC	0	3.3	4.1	3.4	0.1	2.9	0	2.9	2.2	5.0	4.8	0.6	0	1.3	3.7	4.1
REF NO.	IC3304															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	1.9	0	1.9	0	1.9	1.8	0	1.9	1.9	0	1.9	0	4.9	1.9	0	1.9
REC	1.9	0	1.9	0	1.9	1.8	0	1.9	1.9	0	1.9	4.7	4.9	1.9	0	1.9
REF NO.	IC3305															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	2.3	0	2.4	0	2.3	4.8	2.3	0	1.9	0	1.9	1.9	0.3	2.3	4.9	2.2
REC	2.3	0	2.4	4.7	2.3	4.8	2.3	0	1.9	0	1.9	1.9	0.3	2.3	4.9	2.2
REF NO.	IC3305															
PIN NO.	17	18	19	20	21	22										
PLAY	1.5	0	2.0	1.6	0	0										
REC	1.5	0	2.0	1.6	0	0										
REF NO.	IC3306															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	2.4	2.3	2.6	2.0	2.5	2.8	0	1.7	2.0	2.0	1.5	1.0	1.2	2.6	0
REC	0	0	0	0.3	0.1	0	0	0	0.1	0	0	0	0	0	0.1	0
REF NO.	IC3306															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	1.7	2.7	1.8	3.3	0	4.6	2.6	2.3	2.2	0	0	0	0	0	0
REC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC3306															
PIN NO.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
PLAY	0	0	0	0	2.7	0	2.6	2.4	2.4	2.5	2.0	0	0	3.3	1.9	1.9
REC	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC3306															
PIN NO.	49	50	51	52	53	54	55	56								
PLAY	2.0	3.3	0	2.9	2.9	0	2.9	0								
REC	0	0	0	0	0	0	0	0								
REF NO.	IC3308			IC3309			IC3310									
PIN NO.	1	2	3	1	2	3	1	2	3	4	5	6	7	8		
PLAY	5.7	0	4.9	11.9	5.0	0	2.9	0	2.9	0	0	4.9	2.1	0		
REC	5.7	0	4.9	11.9	5.0	0	2.9	4.7	2.9	0	0	4.9	2.1	0		

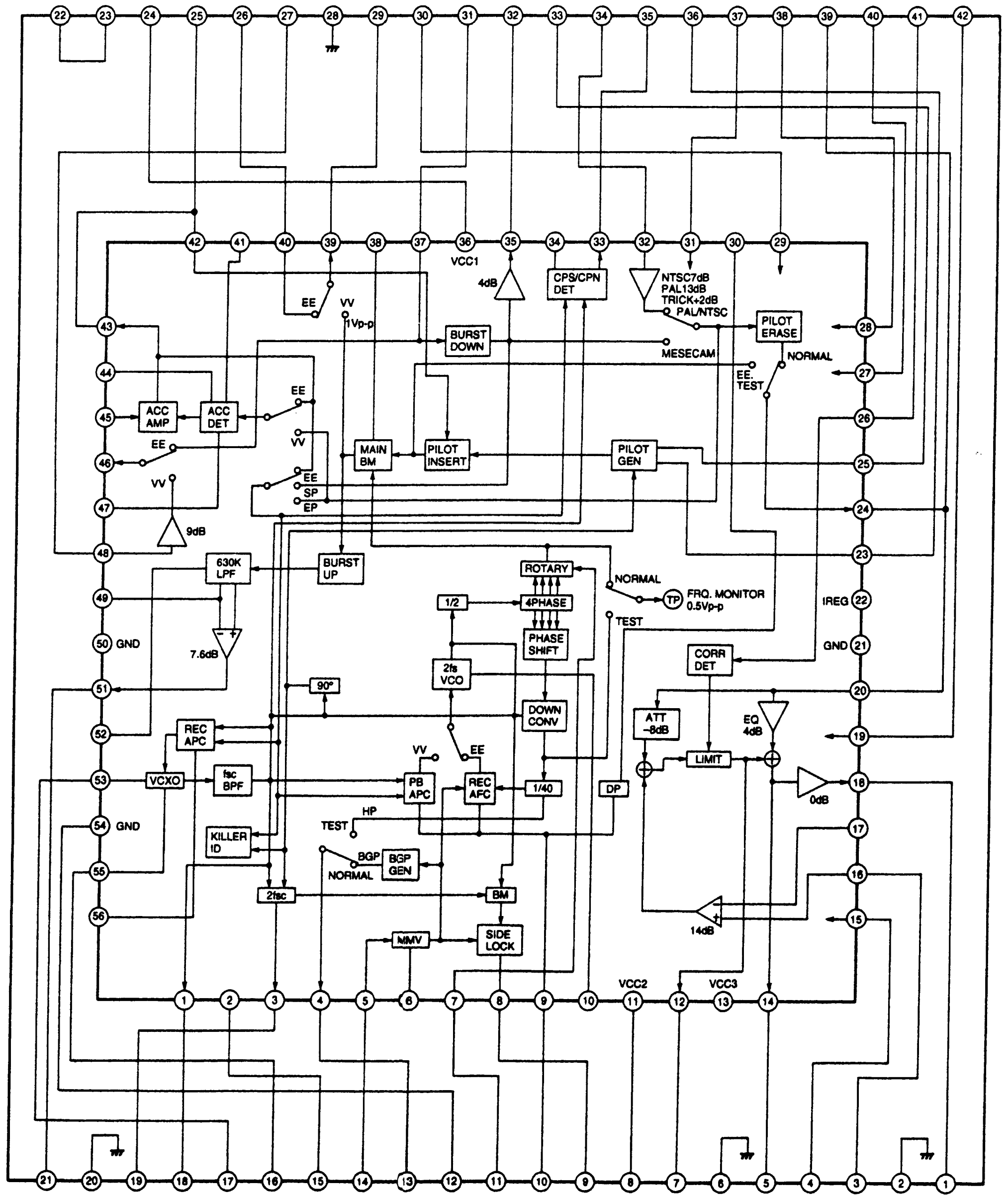
VIDEO 2 TRANSTORs DC VOLTAGE CHART

REF NO.	Q3301			Q3302			Q3303			Q3304			Q3305		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	1.9	0	1.3	2.9	5.0	3.5	2.9	5.0	3.0	2.3	5.0	2.9	1.7	11.8	2.2
REC	1.9	0	1.3	2.9	5.0	3.5	2.9	5.0	3.0	2.3	5.0	2.9	1.7	11.8	2.2
REF NO.	Q3306			Q3307			Q3308			Q3309			Q3310		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	11.8	2.4	11.1	1.2	11.1	1.9	3.8	11.1	4.5	11.8	7.7	11.1	7.0	11.8	7.7
REC	11.8	2.4	11.1	1.2	11.1	1.9	3.8	11.1	4.5	11.8	7.7	11.1	7.0	11.8	7.7

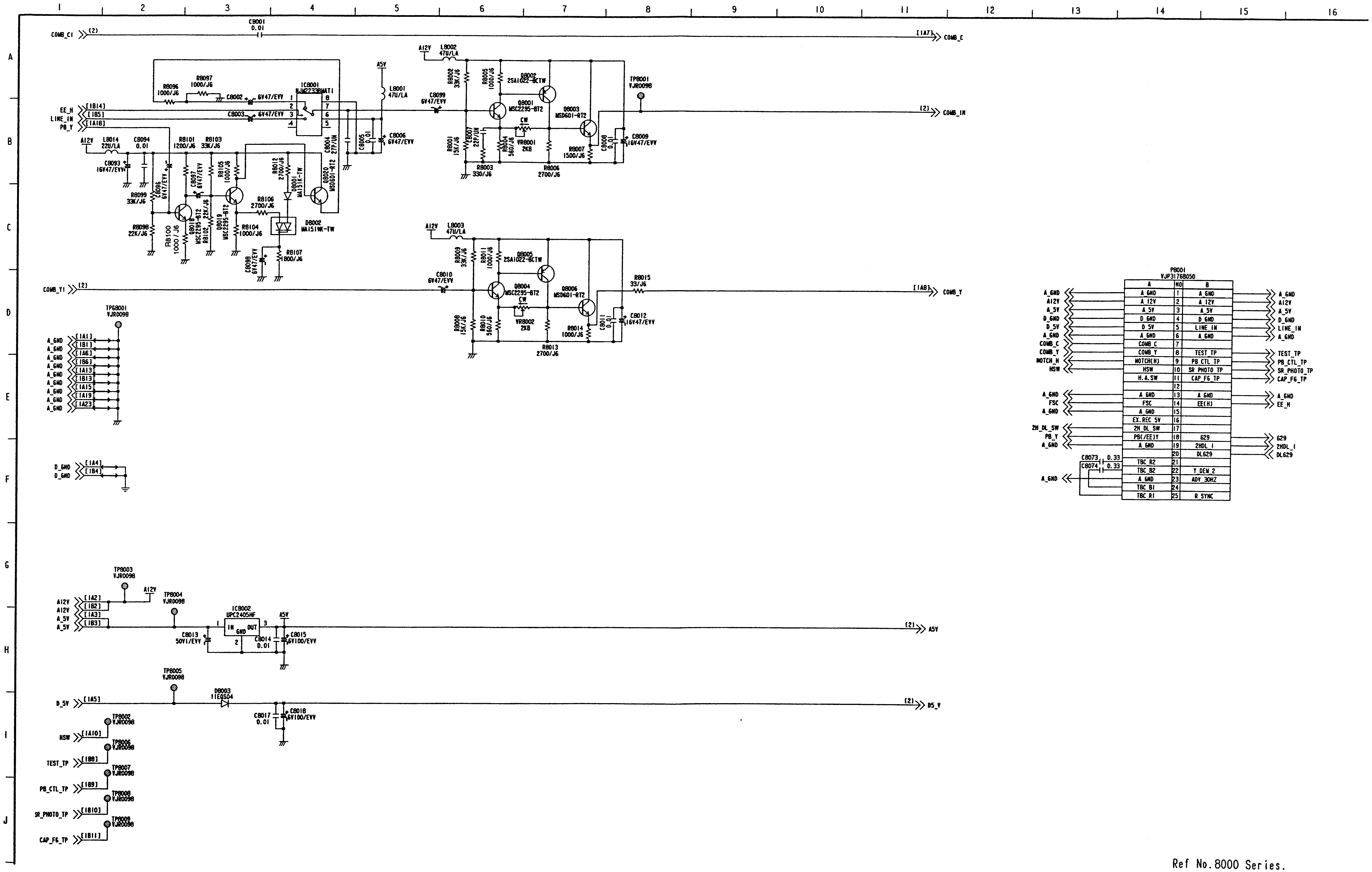
VIDEO 2 TRANSISTORs DC VOLTAGE CHART

REF NO.	Q3311			Q3312			Q3313			Q3314			Q3315		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	1.9	11.8	1.5	2.6	0	1.9	3.0	4.8	3.6	1.5	11.9	2.1	2.3	11.9	2.9
REC	1.9	11.8	1.5	2.6	0	1.9	3.0	4.8	3.6	1.5	11.9	2.1	2.3	11.9	2.9
REF NO.	Q3316			Q3319			Q3321			Q3322			Q3323		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.1	0	1.5	3.0	4.8	3.7	4.0	4.6	4.6	0.7	3.5	1.4	2.5	4.6	3.0
REC	0.1	0	1.5	3.0	4.8	3.7	0	0.1	0.1	0	0.1	0	0	0.1	0.1
REF NO.	Q3324			Q3325			Q3326			Q3328					
	E	C	B	E	C	B	E	C	B	E	C	B			
PLAY	0.6	3.0	1.4	2.7	4.9	2.8	2.1	4.9	2.7	1.4	4.9	2.1			
REC	0	0.1	0	2.7	4.9	2.8	2.1	4.9	2.7	1.4	4.9	2.1			
REF NO.	QR3301			QR3302			QR3303								
	E	C	B	E	C	B	E	C	B						
PLAY	0	4.8	0.1	0	4.8	0	0	0	2.9						
REC	0	4.8	0.1	0	4.8	0	0	0	2.9						

IC3306 (M52370FP)


VCC1
4dB
CPS/CPN DET
NTSC7dB
PAL13dB
TRICK+2dB
PAL/NTSC
PILOT ERASE
EE
VV
1Vp-p
BURST DOWN
MESECAM
NORMAL
EE.
TEST
ACC AMP
ACC DET
MAIN BM
PILOT INSERT
PILOT GEN
SP
EP
9dB
630K LPF
BURST UP
ROTARY
4PHASE
PHASE SHIFT
1/2
NORMAL
TP
FRQ. MONITOR 0.5Vp-p
TEST
IREG
GND
7.6dB
2fs VCO
CORR DET
90°
DOWN CONV
ATT −8dB
EQ 4dB
REC APC
LIMIT
VCXO
fsc BPF
PB APC
REC AFC
1/40
DP
0dB
HP
TEST
KILLER ID
BGP
BGP GEN
NORMAL
2fsc
BM
14dB
MMV
SIDE LOCK
VCC2
VCC3

VIDEO (3) SCHEMATIC DIAGRAM (E7: Page CBA-9) 1/2


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
COMB_C1 (2)
C8001 0.01
[1A7] COMB_C
EE_H [1B14]
LINE_IN [1B5]
PB_Y [1A18]
R8096 1000/J6
R8097 1000/J6
C8002 6V47/EVV
C8003 6V47/EVV
IC8001 NJM2233BMAT1
A5V
L8001 47U/LA
C8004 27P/UN
C8005 0.01
C8006 6V47/EVV
A12V
L8014 22U/LA
C8094 0.01
C8093 16V47/EVV
R8101 1200/J6
R8103 33K/J6
C8096 6V47/EVV
C8097 6V47/EVV
R8105 1000/J6
R8012 2700/J6
D8001 MA151K-TW
Q8020 MSD601-RT2
R8099 33K/J6
R8098 22K/J6
R8100 1000 / J6
Q8018 MSC2295-BT2
R8102 22K/J6
Q8019 MSC2295-BT2
R8106 2700/J6
R8104 1000/J6
D8002 MA151WK-TW
C8098 6V47/EVV
R8107 1800/J6
A12V L8002 47U/LA
R8002 33K/J6
R8005 1000/J6
Q8002 2SA1022-BCTW
C8099 6V47/EVV
Q8001 MSC2295-BT2
Q8003 MSD601-RT2
CW
VR8001 2K8
R8001 15K/J6
C8007 22P/UN
R8004 560/J6
R8003 330/J6
R8006 2700/J6
R8007 1500/J6
C8008 0.01
C8009 16V47/EVV
TP8001 VJR0098
(2) COMB_IN
A12V L8003 47U/LA
R8009 33K/J6
R8011 1000/J6
Q8005 2SA1022-BCTW
C8010 6V47/EVV
Q8004 MSC2295-BT2
Q8006 MSD601-RT2
VR8002 2K8
R8008 15K/J6
R8010 560/J6
R8013 2700/J6
R8014 1000/J6
C8011 0.01
C8012 16V47/EVV
R8015 33/J6
COMB_Y1 (2)
[1A8] COMB_Y
TP68001 VJR0098
A_GND [1A1]
A_GND [1B1]
A_GND [1A6]
A_GND [1B6]
A_GND [1A13]
A_GND [1B13]
A_GND [1A15]
A_GND [1A19]
A_GND [1A23]
A_GND
D_GND [1A4]
D_GND [1B4]
TP8003 VJR0098
A12V
A12V [1A2]
A12V [1B2]
A_5V [1A3]
A_5V [1B3]
TP8004 VJR0098
IC8002 UPC2405HF
IN GND OUT
A5V
C8013 50V1/EVV
C8014 0.01
C8015 6V100/EVV
(2) A5V
TP8005 VJR0098
D_5V [1A5]
D8003 11EQS04
C8017 0.01
C8018 6V100/EVV
(2) D5_V
TP8002 VJR0098
HSW [1A10]
TP8006 VJR0098
TEST_TP [1B8]
TP8007 VJR0098
PB_CTL_TP [1B9]
TP8008 VJR0098
SR_PHOTO_TP [1B10]
TP8009 VJR0098
CAP_F6_TP [1B11]
P8001
VJP31768050
A | NO | B
A_GND | 1 | A_GND
A_12V | 2 | A_12V
A_5V | 3 | A_5V
D_GND | 4 | D_GND
D_5V | 5 | LINE_IN
A_GND | 6 | A_GND
COMB_C | 7 |
COMB_Y | 8 | TEST_TP
NOTCH(H) | 9 | PB_CTL_TP
HSW | 10 | SR_PHOTO_TP
H.A.SW | 11 | CAP_F6_TP
| 12 |
A_GND | 13 | A_GND
FSC | 14 | EE(H)
A_GND | 15 |
EX.REC 5V | 16 |
2H_DL_SW | 17 |
PB(/EE)Y | 18 | 629
A_GND | 19 | 2HDL_I
| 20 | DL629
TBC_R2 | 21 |
TBC_B2 | 22 | Y_DEM_2
A_GND | 23 | ADV_30HZ
TBC_B1 | 24 |
TBC_R1 | 25 | R_SYNC
A_GND A12V A_5V D_GND D_5V A_GND COMB_C COMB_Y NOTCH_H HSW
A_GND FSC A_GND 2H_DL_SW PB_Y A_GND
C8073 0.33
C8074 0.33
A_GND
A_GND A12V A_5V D_GND LINE_IN A_GND TEST_TP PB_CTL_TP SR_PHOTO_TP CAP_F6_TP
A_GND EE_H 629 2HDL_I DL629

Ref No.8000 Series.

VIDEO 3

REF NO.
PIN NO.
PLAY
REC

VIDEO 3

REF NO.
PLAY
REC
REF NO.
PLAY
REC

VIDEO 3 ICs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	IC8001								IC8002							
PIN NO.	1	2	3	4	5	6	7	8	1	2	3					
PLAY	2.9	0	2.9	0	0	4.9	2.2	0	5.7	0	4.9					
REC	2.9	4.7	2.9	0	0	4.9	2.2	0	5.7	0	4.9					

VIDEO 3 TRANSISTORs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	Q8001			Q8002			Q8003			Q8004			Q8005		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.9	11.1	3.6	11.8	6.7	11.1	6.1	11.8	6.7	2.9	11.1	3.6	11.8	6.8	11.1
REC	2.9	11.1	3.6	11.8	6.7	11.1	6.1	11.8	6.7	2.9	11.1	3.6	11.8	6.8	11.1
REF NO.	Q8006			Q8018			Q8019			Q8020					
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	6.1	11.8	6.8	3.5	7.6	4.2	3.5	8.3	4.2	7.7	11.9	8.3			
REC	6.1	11.8	6.8	3.5	7.6	4.2	3.5	8.3	4.2	7.7	11.9	8.3			

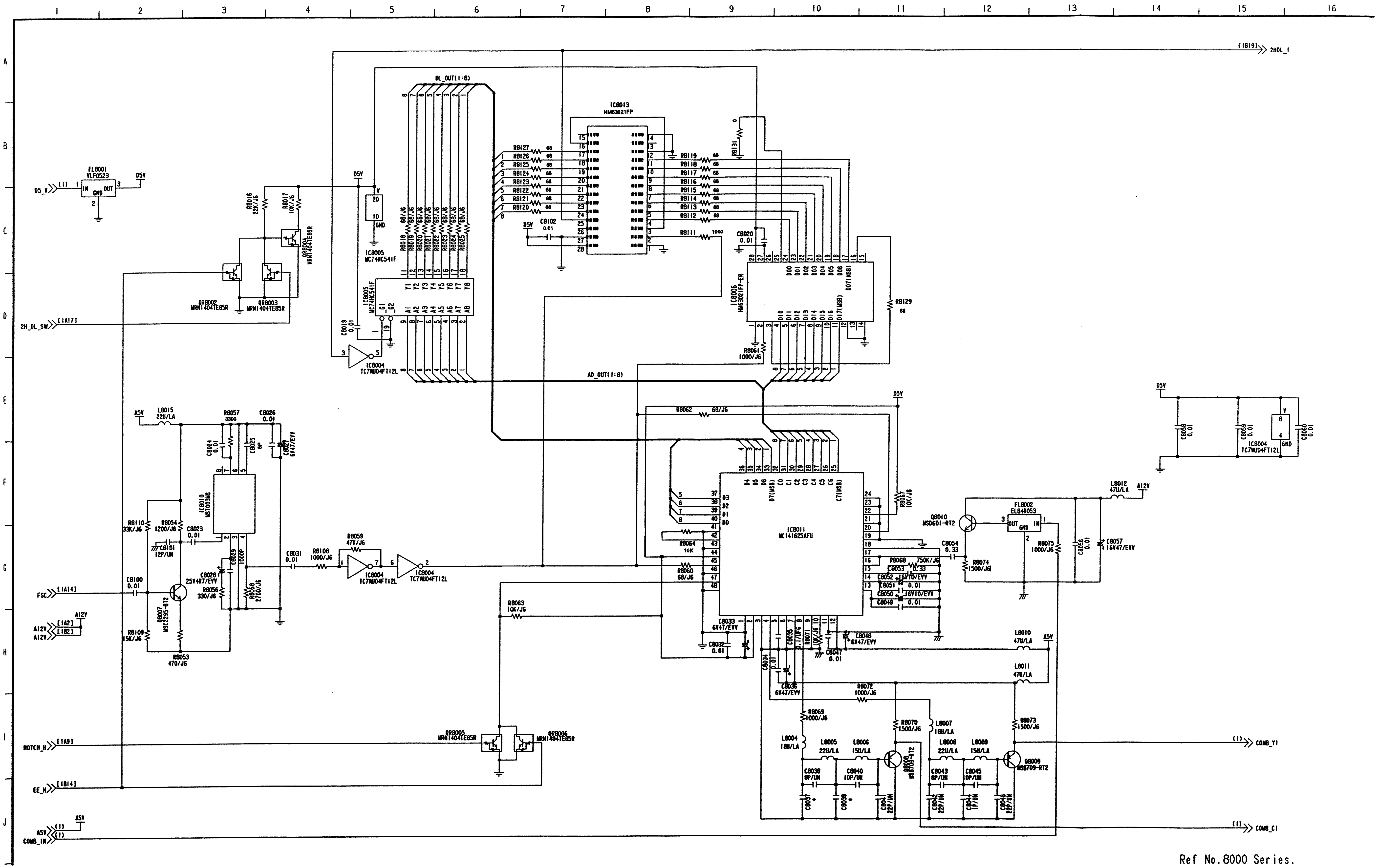
VIDEO 3 ICs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	IC8004															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	2.4	2.3	3.3	0	0.1	2.4	2.4	4.8								
REC	2.4	2.3	3.3	0	0.1	2.4	2.4	4.8								
REF NO.	IC8005															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.1	1.5	2.2	2.1	2.2	2.6	2.2	2.2	2.3	0	2.4	2.2	2.4	2.5	2.0	2.1
REC	0.1	1.8	2.6	1.9	2.0	2.8	2.2	1.7	2.6	0	2.4	2.3	2.4	2.7	2.1	1.8
REF NO.	IC8005															
PIN NO.	17	18	19	20												
PLAY	2.2	1.5	0	4.8												
REC	2.7	1.8	0	4.8												
REF NO.	IC8006															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	2.3	4.8	2.3	0	2.2	2.5	2.3	2.0	2.2	1.5	0	4.3	0	4.5	4.5
REC	0	2.3	4.8	2.6	1.7	0	2.7	2.0	1.8	2.6	1.8	0	4.3	0	4.5	4.5
REF NO.	IC8006															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28				
PLAY	1.5	2.2	2.1	2.3	2.6	2.3	2.3	2.3	3.3	4.4	0	4.8				
REC	1.8	2.7	1.7	1.7	2.1	2.3	1.8	0	3.3	4.3	0	4.8				
REF NO.	IC8008															
PIN NO.	1	2	3	4	5											
PLAY	2.4	4.5	0	4.8	4.8											
REC	2.4	4.3	0	4.8	4.8											
REF NO.	IC8010															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	2.5	2.0	0	2.6	3.1	4.8	0	0								
REC	2.5	2.0	0	2.6	3.1	4.8	5.4	0								
REF NO.	IC8011															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	4.9	0	0.8	1.4	0	4.8	0.7	0	1.1	0	4.8	4.4	0	2.9	0
REC	0	4.8	0	0	1.4	0	0	0.8	0	1.1	0	4.8	4.4	1.4	2.8	2.9
REF NO.	IC8011															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	2.6	0	0	2.3	0	0	0	0	1.5	2.2	2.1	2.2	2.7	2.2	2.2	2.2
REC	2.9	0	0	2.3	0	4.8	0	0	1.8	2.6	1.7	2.0	2.7	2.2	1.7	0
REF NO.	IC8011															
PIN NO.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
PLAY	1.5	2.3	2.1	2.2	2.7	2.2	2.3	2.3	0	4.8	0	4.8	2.3	0	4.8	0
REC	1.9	0	1.6	2.0	2.8	2.2	1.8	2.7	0	4.8	0	4.8	2.3	0	0	0

VIDEO 3 TRANSISTORs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	Q8007			Q8008			Q8009			Q8010					
	E	C	B	E	C	B	E	C	B	E	C	B			
PLAY	1.0	2.2	1.8	1.4	0	0.7	1.4	0	0.8	5.5	11.9	0.1			
REC	1.0	2.2	1.8	1.4	0	0.7	1.4	0	0.8	5.5	11.9	0.1			
REF NO.	QR8002			QR8003			QR8004			QR8005			QR8006		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	0	0	0	4.8	0	3.3	0	0	4.8	0	0	4.8	0
REC	0	0	4.7	0	0	4.8	0	3.3	0	0	0	0	0	0	4.7

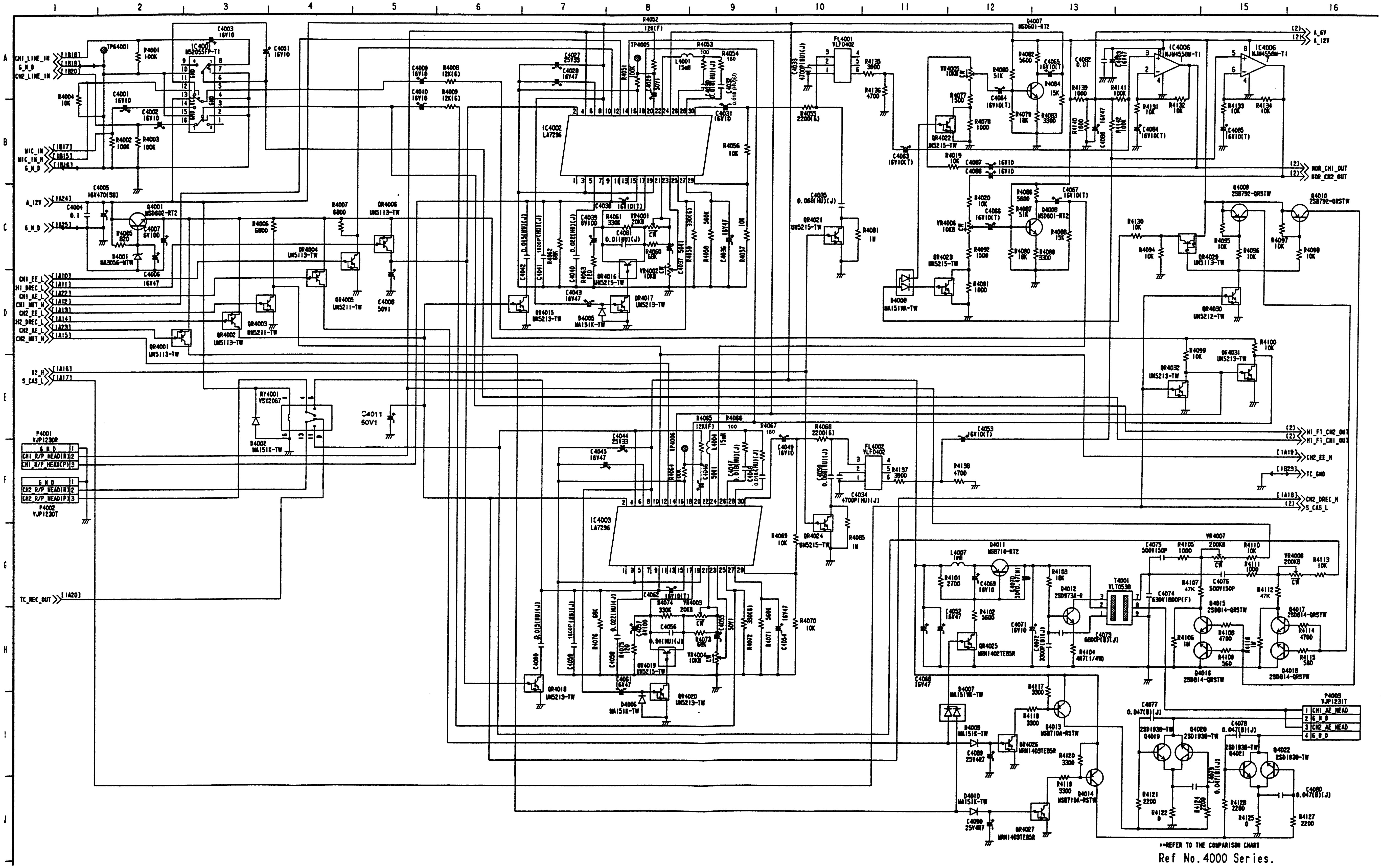
VIDEO (3) SCHEMATIC DIAGRAM (E7:Page CBA-9) 2/2



IC8013
HM63021FP
IC8005
MC74HC541F
IC8006
HM63021FP-ER
IC8011
MC141625AFU
IC8010
MST003MS
IC8004
TC7WU04FT12L
FL8001
VLF0523
FL8002
ELB4R053
QR8002
MRN1404TE85R
QR8003
MRN1404TE85R
QR8004
MRN1404TE85R
QR8005
MRN1404TE85R
QR8006
MRN1404TE85R
Q8007
MSC2295-BT2
Q8008
MSB709-RT2
Q8009
MSB709-RT2
Q8010
MSD601-RT2
DL_OUT(1:8)
AD_OUT(1:8)
D5_V
D5V
A5V
A12V
2H_DL_SW
FSC
NOTCH_N
EE_N
COMB_IN
(1B19) 2HDL_I
(1) COMB_Y1
(1) COMB_C1
(1A17)
(1A14)
(1A2)
(1B2)
(1A9)
(1B14)
L8015
22U/LA
R8057
3300
C8026
0.01
R8110
33K/J6
R8054
1200/J6
C8023
0.01
C8101
12P/UN
C8100
0.01
R8109
15K/J6
R8053
470/J6
R8056
330/J6
C8031
0.01
R8108
1000/J6
R8059
47K/J6
R8063
10K/J6
R8062
68/J6
R8064
10K
R8060
68/J6
R8061
1000/J6
R8129
68
R8131
0
R8111
1000
C8020
0.01
C8102
0.01
R8016
22K/J6
R8017
10K/J6
C8019
0.01
C8054
0.33
R8074
1500/J6
R8075
1000/J6
L8012
47U/LA
C8057
16V47/EVV
L8010
47U/LA
L8011
47U/LA
R8072
1000/J6
R8069
1000/J6
R8070
1500/J6
R8073
1500/J6
L8004
18U/LA
L8005
22U/LA
L8006
15U/LA
L8007
18U/LA
L8008
22U/LA
L8009
15U/LA
C8058
0.01
C8059
0.01
C8060
0.01

Ref No.8000 Series.

AUDIO 1 SCHEMATIC DIAGRAM (E8: Page CBA-6)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A
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H
I
J
CH1_LINE_IN
G_N_D
CH2_LINE_IN
MIC_IN
MIC_IN_H
G_N_D
A_12V
G_N_D
CH1_EE_L
CH1_DREC_L
CH1_AE_L
CH1_MUT_H
CH2_EE_L
CH2_DREC_L
CH2_AE_L
CH2_MUT_H
X2_H
S_CAS_L
TC_REC_OUT
P4001
VJP1230R
CH1_R/P_HEAD(R)
CH1_R/P_HEAD(P)
CH2_R/P_HEAD(R)
CH2_R/P_HEAD(P)
P4002
VJP1230T
TP64001
IC4001
M5205SFP-T1
IC4002
LA7296
IC4003
LA7296
IC4005
NJM4558M-T1
IC4006
NJM4558M-T1
FL4001
VLF0402
FL4002
VLF0402
RY4001
VSY2067
T4001
VLT0538
Q4001
MSD602-RT2
D4001
MA3056-MTW
D4002
MA151K-TW
A_6V
A_12V
NOR_CH1_OUT
NOR_CH2_OUT
HI_FI_CH2_OUT
HI_FI_CH1_OUT
CH2_EE_H
TC_GND
CH2_DREC_H
S_CAS_L
P4003
VJP1231T
CH1_AE_HEAD
G_N_D
CH2_AE_HEAD
G_N_D

**REFER TO THE COMPARISON CHART

Ref No.4000 Series.

AUDIO 1 ICs DC VOLTAGE CHART

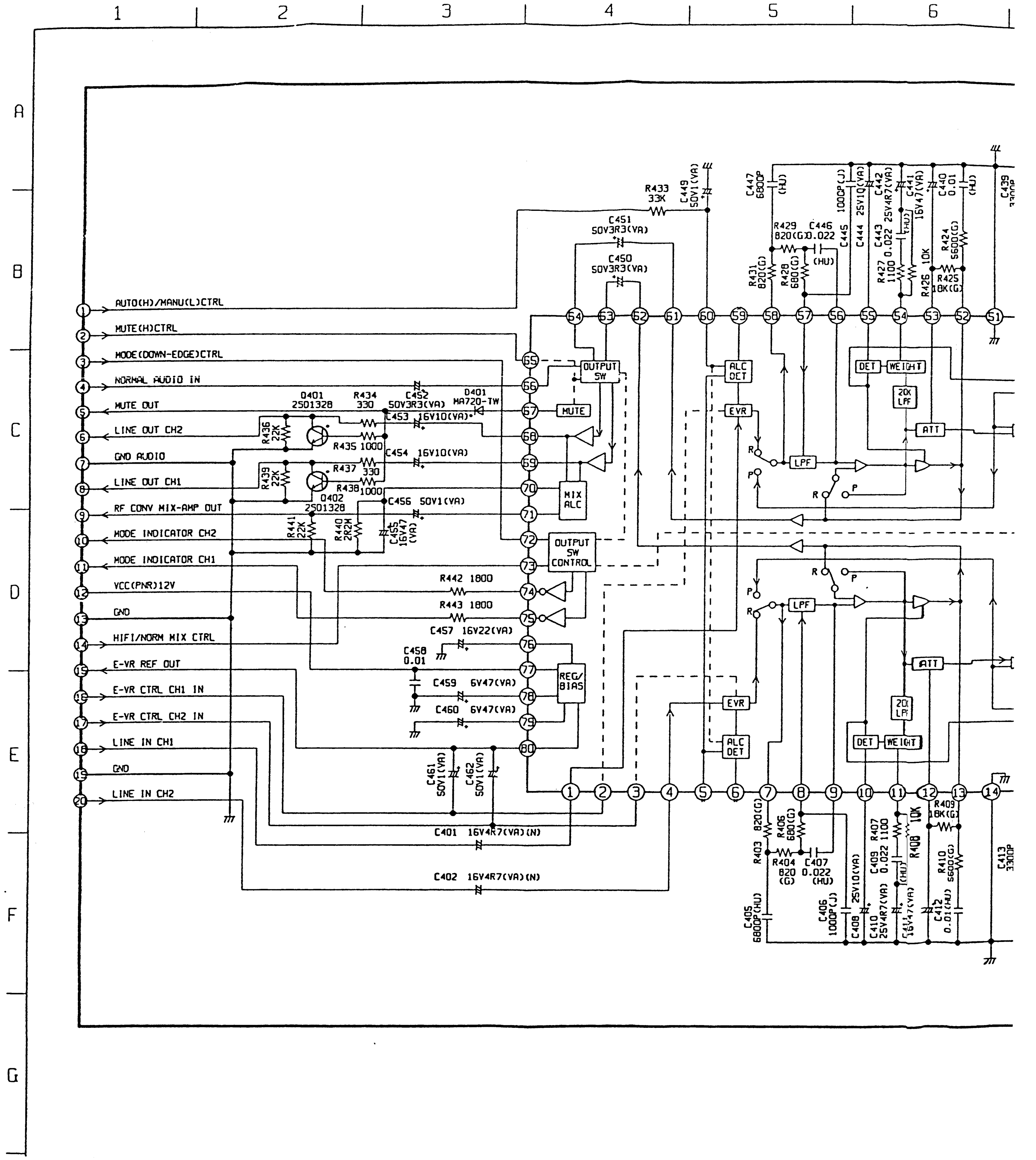
REF NO.	IC4001															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.8	0	4.4	0	4.4	4.4	0	5.8	5.8	0	5.8	0	11.9	5.8	0	5.8
REC	5.8	0	4.4	0	4.4	4.4	0	5.8	5.8	0	5.8	0	11.9	5.8	0	5.8
REF NO.	IC4002															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.1	0	0	0	7.9	9.0	0	11.9	0	0	0	0	0	0	2.1	0
REC	1.4	4.9	0	0	7.9	9.0	0	11.9	0	4.7	0	0	0	0	2.1	0
REF NO.	IC4002															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
PLAY	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0.2	0	0	4.0		
REC	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0	0	0	4.0		
REF NO.	IC4003															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.2	0	0	0	7.9	8.9	0	11.9	0	0	0	0	0	0	2.1	0
REC	11.4	14.9	0	0	7.9	8.9	0	11.9	0	4.7	0	0	0	0	2.1	0
REF NO.	IC4003															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
PLAY	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0.2	0	0	4.2		
REC	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0	0	0	4.2		

AUDIO 1 TRANSISTORs DC VOLTAGE CHART

REF NO.	Q4001			Q4007			Q4009			Q4010			Q4011		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	5.0	11.9	5.6	2.4	7.7	3.0	11.9	11.6	11.1	11.9	11.6	11.1	11.9	0.1	11.9
REC	5.0	11.9	5.6	2.4	7.7	3.0	11.9	11.6	11.1	11.9	11.6	11.1	11.6	0	10.9
REF NO.	Q4013			Q4014			Q4015			Q4016			Q4017		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	11.9	0	11.9	11.9	0	11.9	0	0	0.6	0	0	0.7	0	0	0.6
REC	11.9	11.8	11.2	11.9	11.8	11.2	0	0	0.6	0	0	0.7	0	0	0.6
REF NO.	Q4018			Q4019			Q4020			Q4021			Q4022		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0
REC	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.6	0	0	0.6
REF NO.	QR4001			QR4002			QR4003			QR4004			QR4005		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	5.0	0	4.9	5.0	0	4.9	0	0	4.8	5.0	0	4.9	0	0	4.8
REC	5.0	5.0	0	5.0	5.0	0	0	4.7	0	5.0	5.0	0	0	4.7	0
REF NO.	QR4006			QR4015			QR4016			QR4017			QR4018		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	5.0	0	4.9	0	0	0	2.2	2.2	0.1	0	0.1	0	0	0	0
REC	5.0	5.0	0	0	0	4.9	2.2	2.2	0	0	0	0	0	0	5.0
REF NO.	QR4019			QR4020			QR4021			QR4024			QR4025		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.2	0	0.1	0	0.1	0	0	0	0	0	0	0	0	11.9	0
REC	2.2	2.2	0	0	0	0	0	0	0	0	0	0	0	0	4.5
REF NO.	QR4026			QR4027			QR4028			QR4029			QR4030		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	11.9	0	0	11.9	0	11.9	0	11.8	11.9	11.8	0	0	0	5.0
REC	0	0	4.5	0	0	4.5	11.9	0	11.8	11.9	11.8	0	0	0	5.0
REF NO.	QR4031			QR4032											
	E	C	B	E	C	B									
PLAY	0	4.0	0	0	0	5.0									
REC	0	4.0	0	0	0	5.0									

FM AUDIO PACK SCHEMATIC DIAGRAM (E8-1: Page CBA-10)

IC4505 (VEP04353B)



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A
B
C
D
E
F
G
AUTO(H)/MANU(L)CTRL
MUTE(H)CTRL
MODE(DOWN-EDGE)CTRL
NORMAL AUDIO IN
MUTE OUT
LINE OUT CH2
GND AUDIO
LINE OUT CH1
RF CONV MIX-AMP OUT
MODE INDICATOR CH2
MODE INDICATOR CH1
VCC(PNR)12V
GND
HIFI/NORM MIX CTRL
E-VR REF OUT
E-VR CTRL CH1 IN
E-VR CTRL CH2 IN
LINE IN CH1
GND
LINE IN CH2
Q401 2SD1328
Q402 2SD1328
R434 330
R435 1000
R436 22K
R437 330
R438 1000
R439 22K
R440 2R2M
R441 22K
R442 1800
R443 1800
C452 50V3R3(VA)
C453 16V10(VA)
C454 16V10(VA)
C455 16V47 (VA)
C456 50V1(VA)
C457 16V22(VA)
C458 0.01
C459 6V47(VA)
C460 6V47(VA)
C461 50V1(VA)
C462 50V1(VA)
C401 16V4R7(VA)(N)
C402 16V4R7(VA)(N)
D401 MA720-TW
R433 33K
C449 50V1(VA)
C451 50V3R3(VA)
C450 50V3R3(VA)
C447 6800P (HU)
R429 820(G)
C446 0.022 (HU)
R431 820(G)
R428 680(G)
C445 1000P(J)
C444 25V10(VA)
C443 0.022
C442 25V4R7(VA)
R427 1100
C441 16V47(VA) (HU)
R426 10K
C440 0.01 (HU)
R424 5600(G)
R425 18K(G)
C439 3300P
OUTPUT SW
MUTE
MIX ALC
OUTPUT SW CONTROL
REG/ BIAS
ALC DET
EVR
LPF
DET
WEIGHT
20K LPF
ATT
R
P
R403 820(G)
R406 680(G)
R404 820 (G)
C407 0.022 (HU)
C405 6800P(HU)
C406 1000P(J)
C408 25V10(VA)
C409 0.022
R407 1100
R408 10K
C410 25V4R7(VA)
C411 16V47(VA)
C412 0.01(HU)
R409 18K(G)
R410 5600(G)
C413 3300P

FM AUDIO PACK SCHEMATIC DIAGRAM (E8-1: Page CBA-10)

IC4505 (VEP04353B)

16
5.8
5.8
16
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0
16
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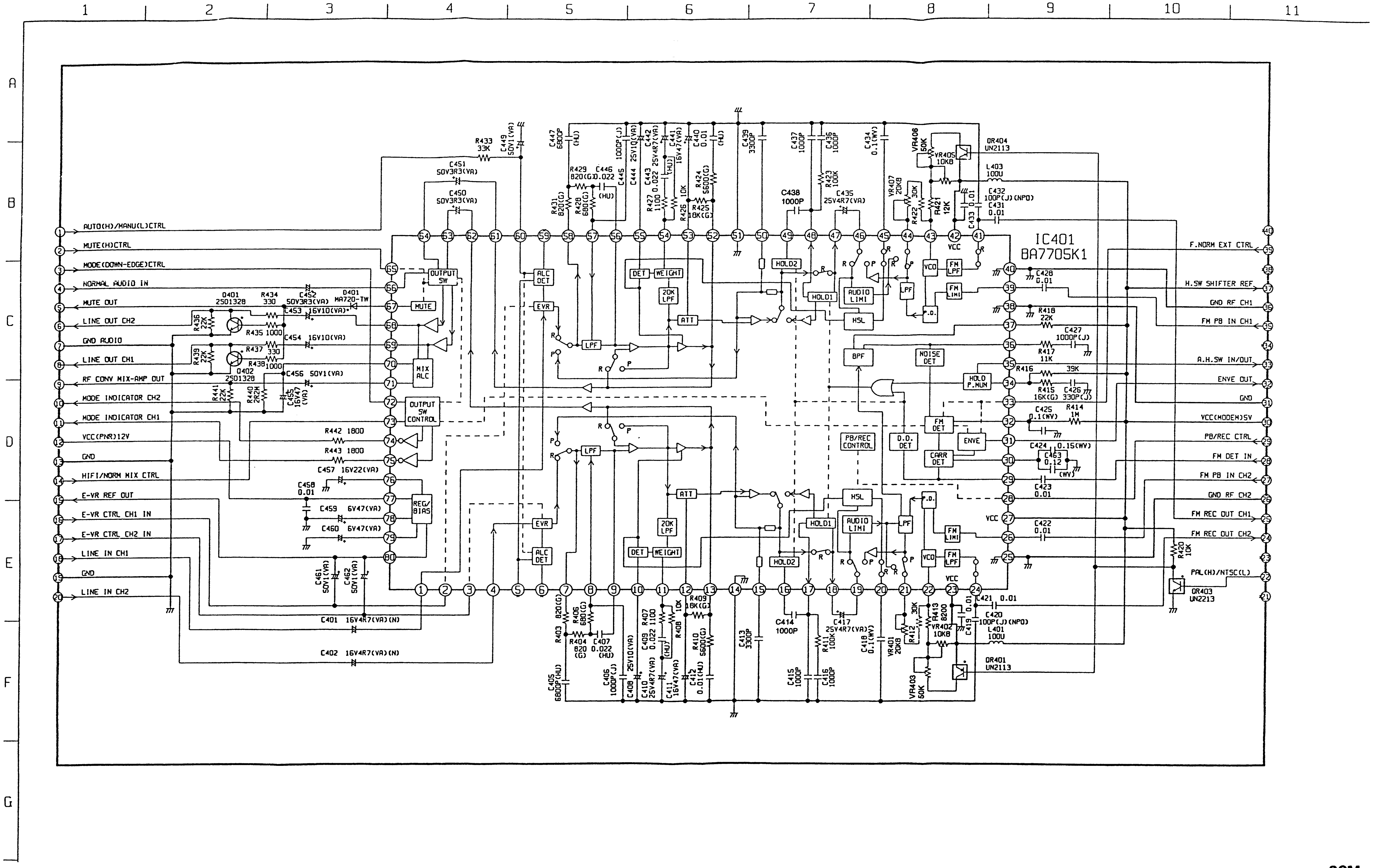

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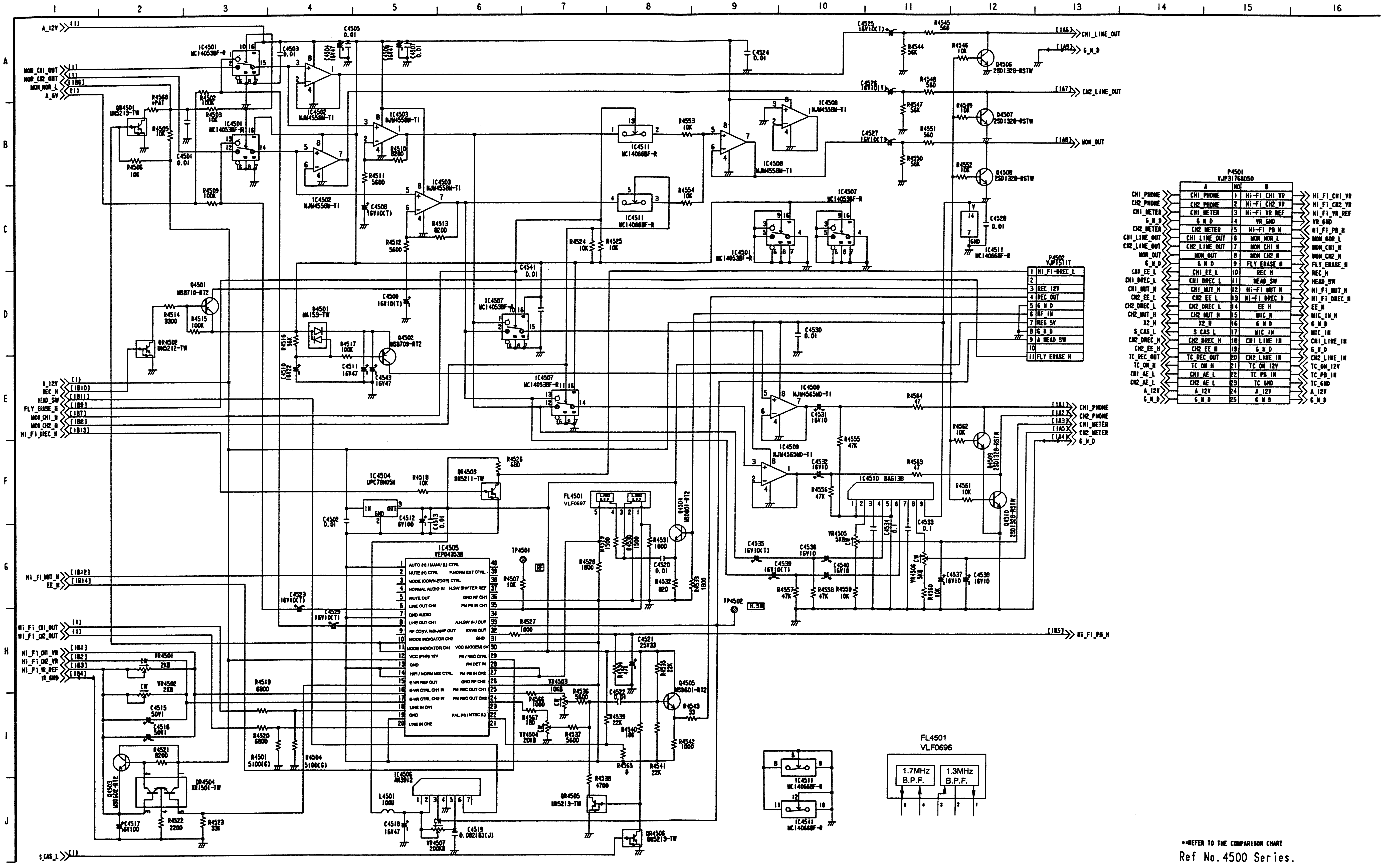
11
A
B
C
D
E
F
G
IC401
BA7705K1
① AUTO(H)/MANU(L)CTRL
② MUTE(H)CTRL
③ MODE(DOWN-EDGE)CTRL
④ NORMAL AUDIO IN
⑤ MUTE OUT
⑥ LINE OUT CH2
⑦ GND AUDIO
⑧ LINE OUT CH1
⑨ RF CONV MIX-AMP OUT
⑩ MODE INDICATOR CH2
⑪ MODE INDICATOR CH1
⑫ VCC(PNR)12V
⑬ GND
⑭ HIFI/NORM MIX CTRL
⑮ E-VR REF OUT
⑯ E-VR CTRL CH1 IN
⑰ E-VR CTRL CH2 IN
⑱ LINE IN CH1
⑲ GND
⑳ LINE IN CH2
㊴ F.NORM EXT CTRL
㊲ H.SW SHIFTER REF
㊱ GND RF CH1
㉟ FM PB IN CH1
㉝ A.H.SW IN/OUT
㉜ ENVE OUT
㉛ GND
㉚ VCC(MODEM)5V
㉙ PB/REC CTRL
㉘ FM DET IN
㉗ FM PB IN CH2
㉖ GND RF CH2
㉕ FM REC OUT CH1
㉔ FM REC OUT CH2
㉒ PAL(H)/NTSC(L)
OUTPUT SW
MUTE
MIX ALC
OUTPUT SW CONTROL
REG/ BIAS
ALC DET
EVR
LPF
DET
WEIGHT
20K LPF
ATT
HOLD2
HOLD1
AUDIO LIMI
HSL
VCO
FM LPF
FM LIMI
BPF
NOISE DET
HOLD P.MUN
FM DET
ENVE
D.O. DET
CARR DET
PB/REC CONTROL
VCC
Q401 2SD1328
Q402 2SD1328
R434 330
C452 50V3R3(VA)
D401 MA720-TW
C453 16V10(VA)
R435 1000
C454 16V10(VA)
R437 330
R438 1000
C456 50V1(VA)
R436 22K
R439 22K
R441 22K
R440 2R2K
C455 16V47 (VA)
R442 1800
R443 1800
C457 16V22(VA)
C458 0.01
C459 6V47(VA)
C460 6V47(VA)
C461 50V1(VA)
C462 50V1(VA)
C401 16V4R7(VA)(N)
C402 16V4R7(VA)(N)
R433 33K
C449 50V1(VA)
C451 50V3R3(VA)
C450 50V3R3(VA)
C447 680P (HJ)
R429 820(G)
C446 0.022 (HJ)
R431 820(G)
R428 680(G)
C445 1000P(J)
C444 25V10(VA)
C443 0.022
R427 1100
C442 25V4R7(VA)
C441 16V47(VA)
R426 10K
C440 0.01 (HJ)
R424 5600(G)
R425 18K(G)
R423 100K
C439 3300P
C438 1000P
C437 1000P
C436 1000P
C435 25V4R7(VA)
C434 0.1(WV)
VR406 50K
VR405 10KB
VR407 20KB
R422 30K
R421 12K
QR404 UN2113
L403 100U
C432 100P(J)(NPO)
C433 0.01
C431 0.01
C428 0.01
R418 22K
C427 1000P(J)
R417 11K
R416 39K
R415 16K(G)
C426 330P(J)
C425 0.1(WV)
R414 1M
C424 0.15(WV)
C463 0.12 (WV)
C423 0.01
C422 0.01
R420 10K
QR403 UN2213
C421 0.01
C420 100P(J)(NPO)
C419 0.01
L401 100U
R413 8200
R412 30K
VR402 10KB
VR401 20KB
QR401 UN2113
VR403 50K
C418 0.1(WV)
C417 25V4R7(VA)
R411 100K
C416 1000P
C415 1000P
C414 1000P
C413 3300P
R410 5600(G)
R409 18K(G)
R408 10K
C412 0.01(HJ)
C411 16V47(VA)
R407 1100
C409 0.022 (HJ)
C410 25V4R7(VA)
C408 25V10(VA)
C406 1000P(J)
C407 0.022 (HJ)
R406 680(G)
R404 820 (G)
R403 820(G)
C405 680P(HJ)

AUDIO 2 SCHEMATIC DIAGRAM (E8: Page CBA-6)


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
A_12V (1)
NOR_CH1_OUT
NOR_CH2_OUT
MON_NOR_L (IB6)
A_6V
IC4501 MC14053BF-R
IC4502 NJM4558M-T1
IC4503 NJM4558M-T1
IC4507 MC14053BF-R
IC4508 NJM4558M-T1
IC4509 NJM4565MD-T1
IC4510 BA6138
IC4511 MC14066BF-R
IC4504 UPC78N05H
IC4505 VEP04353B
IC4506 AN3812
QR4501 UN5213-TW
QR4502 UN5212-TW
QR4503 UN5211-TW
QR4504 XX1501-TW
QR4505 UN5213-TW
QR4506 UN5213-TW
Q4501 MSB710-RT2
Q4502 MSB709-RT2
Q4503 MSD602-RT2
Q4504 MSD601-RT2
Q4505 MSD601-RT2
Q4506 2SD1328-RSTW
Q4507 2SD1328-RSTW
Q4508 2SD1328-RSTW
Q4509 2SD1328-RSTW
Q4510 2SD1328-RSTW
D4501 MA153-TW
FL4501 VLF0697
VR4501 2KB
VR4502 2KB
VR4503 10KB
VR4504 20KB
VR4505 5KB
VR4506 5KB
VR4507 200KB
L4501 100U
TP4501
TP4502
(1A6) CH1_LINE_OUT
(1A9) G_N_D
(1A7) CH2_LINE_OUT
(1A8) MON_OUT
(1A1) CH1_PHONE
(1A2) CH2_PHONE
(1A3) CH1_METER
(1A5) CH2_METER
(1A4) G_N_D
(1B5) Hi_Fi_PB_H
A_12V (1)
REC_H (1B10)
HEAD_SW (1B11)
FLY_ERASE_H (1B9)
MON_CH1_H (1B7)
MON_CH2_H (1B8)
Hi_Fi_DREC_H (1B13)
Hi_Fi_MUT_H (1B12)
EE_H (1B14)
Hi_Fi_CH1_OUT (1)
Hi_Fi_CH2_OUT (1)
Hi_Fi_CH1_VR (1B1)
Hi_Fi_CH2_VR (1B2)
Hi_Fi_VR_REF (1B3)
VR_GND (1B4)
S_CAS_L (1)
P4501 VJP3176B050
A | NO | B
CH1 PHONE | 1 | Hi-Fi CH1 VR
CH2 PHONE | 2 | Hi-Fi CH2 VR
CH1 METER | 3 | Hi-Fi VR REF
G N D | 4 | VR GND
CH2 METER | 5 | Hi-Fi PB H
CH1 LINE OUT | 6 | MON NOR L
CH2 LINE OUT | 7 | MON CH1 H
MON OUT | 8 | MON CH2 H
G N D | 9 | FLY ERASE H
CH1 EE L | 10 | REC H
CH1 DREC L | 11 | HEAD SW
CH1 MUT H | 12 | Hi-Fi MUT H
CH2 EE L | 13 | Hi-Fi DREC H
CH2 DREC L | 14 | EE H
CH2 MUT H | 15 | MIC H
X2 H | 16 | G N D
S CAS L | 17 | MIC IN
CH2 DREC H | 18 | CH1 LINE IN
CH2 EE H | 19 | G N D
TC REC OUT | 20 | CH2 LINE IN
TC ON H | 21 | TC ON 12V
CH1 AE L | 22 | TC PB IN
CH2 AE L | 23 | TC GND
A 12V | 24 | A 12V
G N D | 25 | G N D
P4502 VJP1511T
1 Hi_Fi-DREC_L
2
3 REC 12V
4 REC OUT
5 G N D
6 RF IN
7 REG 5V
8 G N D
9 A HEAD SW
10
11 FLY ERASE H
FL4501 VLF0696
1.7MHz B.P.F.
1.3MHz B.P.F.
**REFER TO THE COMPARISON CHART
Ref No. 4500 Series.

AUD

REF
PIN N
PLA
REC
REF
PIN N
PLA
REC
REF :
PIN N
PLA
REC
REF
PIN N
PLA
REC
REF
PIN N
PLA
REC
REF
PIN N
PLA
REC
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PIN N
PLA
REC
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PIN N
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PIN N
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PIN N
PLA
REC

AUD

REF
PLA
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REC
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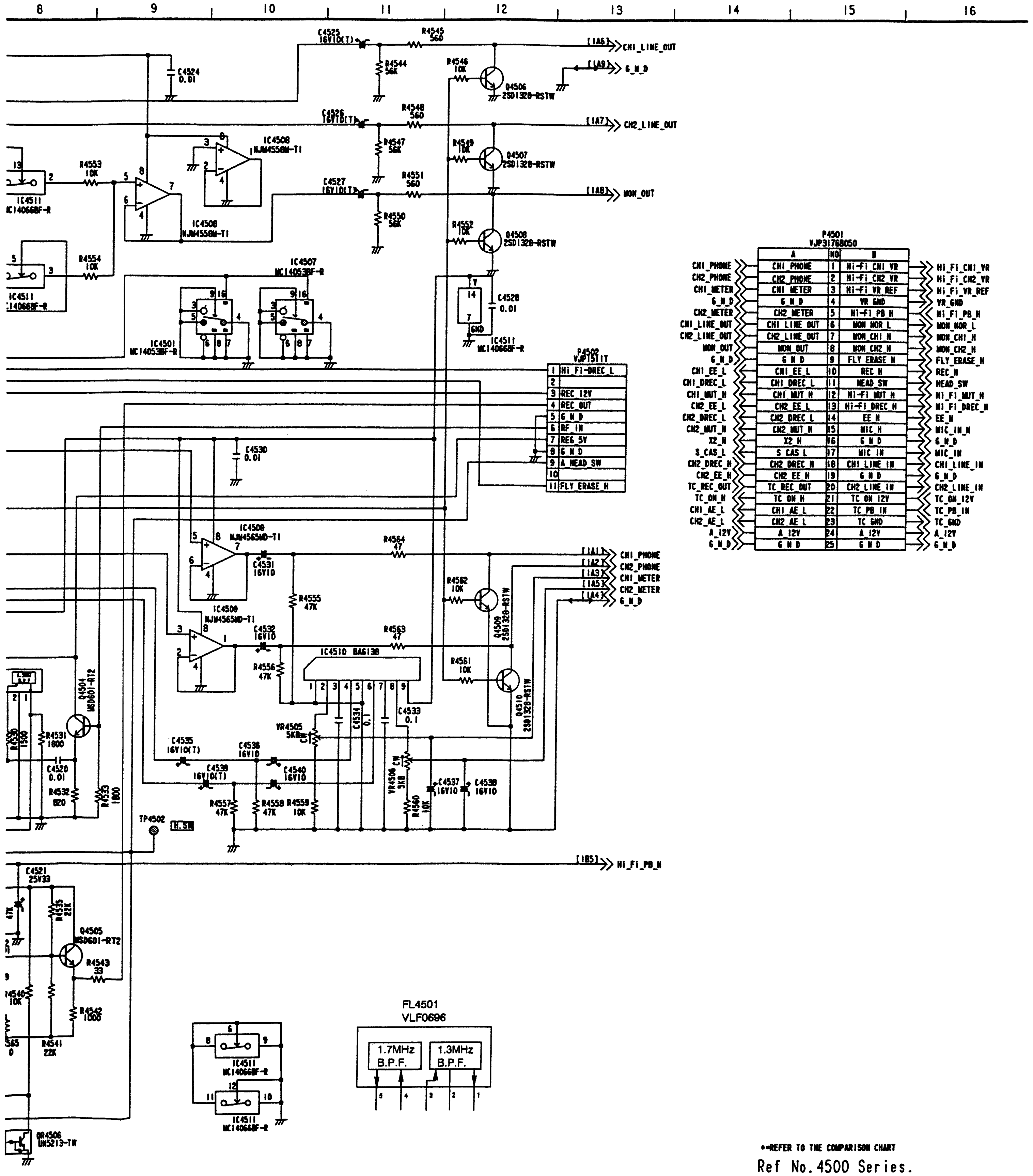
PLA
REC


8
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16
IC4508 NJM4558M-T1
IC4507 MC14053BF-R
IC4501 MC14053BF-R
IC4511 MC14066BF-R
IC4509 NJM4565MD-T1
IC4510 BA6138
P4501 VJP31768050
P4502 VJP15111T
Q4506 2SD1328-RSTW
Q4507 2SD1328-RSTW
Q4508 2SD1328-RSTW
Q4509 2SD1328-RSTW
Q4510 2SD1328-RSTW
Q4504 MSD601-RT2
Q4505 MSD601-RT2
QR4506 UN5213-TW
VR4505 5KB
VR4506 5KB
TP4502
FL4501 VLF0696
1.7MHz B.P.F.
1.3MHz B.P.F.
CH1_LINE_OUT
CH2_LINE_OUT
MON_OUT
G_N_D
HI_FI_PB_H
CH1_PHONE
CH2_PHONE
CH1_METER
CH2_METER
HI_FI_DREC_L
REC 12V
REC OUT
RF IN
REG 5V
A_HEAD SW
FLY ERASE H

*=REFER TO THE COMPARISON CHART

Ref No.4500 Series.

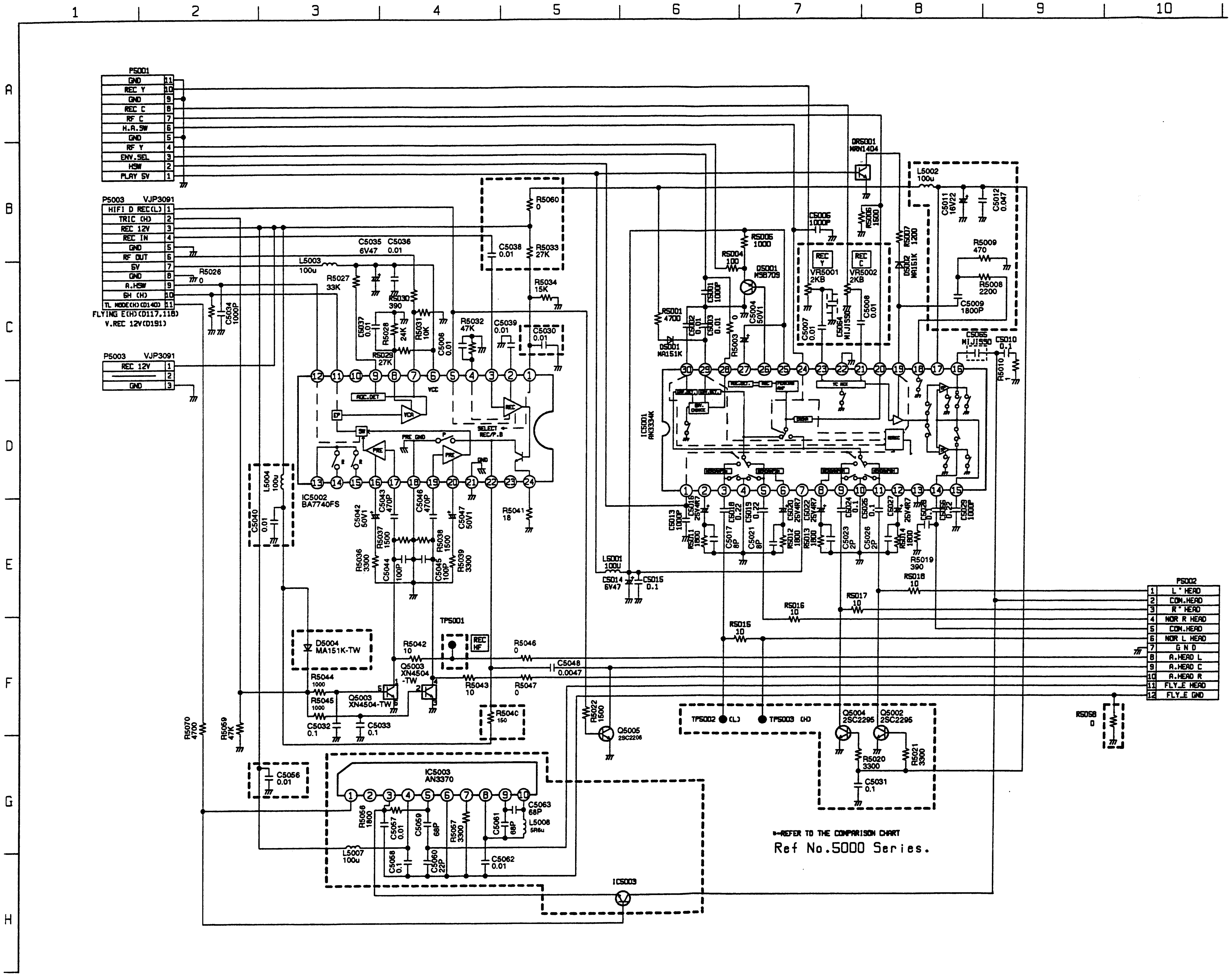
AUDIO 2 ICs DC VOLTAGE

REF NO.	IC4501															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.8	5.9	0	0	0	0	0	0	0	0	0	5.9	5.9	5.9	5.9	11.9
REC	5.8	5.9	0	0	0	0	0	0	0	0	0	5.9	5.9	5.9	5.9	11.9
REF NO.	IC4502															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REF NO.	IC4503								IC4504							
PIN NO.	1	2	3	4	5	6	7	8	1	2	3					
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9	11.9	0	4.9					
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9	11.9	0	4.9					
REF NO.	IC4505															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	0	5.3	5.3	1.2	0	0	0	0	1.7	1.7	11.9	0	0	4.8	4.8
REC	0	0	5.3	0	0.2	0	0	0	0	1.7	1.7	11.9	0	0	4.8	4.4
REF NO.	IC4505															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	4.5	1.8	0	1.8	0	0	0	0	0	0	0	0	0	4.9	0	3.5
REC	4.5	1.8	0	1.8	0	0	0	0	0	0	0	0	4.7	4.9	0	0
REF NO.	IC4505															
PIN NO.	33	34	35	36	37	38	39	40								
PLAY	0	0	0	0	4.9	0	0	0								
REC	4.9	0	0	0	4.9	0	0	0								
REF NO.	IC4506															
PIN NO.	1	2	3	4	5	6	7									
PLAY	0	4.9	4.9	0	0.7	4.8	0									
REC	0	4.9	4.9	0	0.7	4.8	0									
REF NO.	IC4507															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.9	5.9	0	0	0	0	0	0	0	11.9	11.9	5.9	5.9	5.9	5.9	11.9
REC	5.9	5.9	0	0	0	0	0	0	0	11.9	11.9	5.9	5.9	5.9	5.9	11.9
REF NO.	IC4508															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	11.4	11.4	0	0	5.9	5.9	5.9	11.9								
REC	11.4	11.4	0	0	5.9	5.9	5.9	11.9								
REF NO.	IC4509															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REF NO.	IC4510															
PIN NO.	1	2	3	4	5	6	7	8	9							
PLAY	0	1.6	2.2	1.9	0	1.9	2.3	1.7	11.9							
REC	0	0	0.6	1.9	0	1.9	0.6	0	11.9							

AUDIO 2 TRANSISTORs DC VOLTAGE

REF NO.	Q4501			Q4502			Q4503			Q4504			Q4505		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	11.9	0	11.8	11.5	0.2	11.7	4.8	11.9	5.4	1.3	4.9	1.9	1.8	4.9	2.4
REC	11.9	11.7	11.1	11.3	0	11.7	4.8	11.9	5.4	2.4	4.9	3.0	1.8	4.9	2.4
REF NO.	Q4507			Q4508			Q4509			Q4510					
	E	C	B	E	C	B	E	C	B	E	C	B			
PLAY	0	0	0.3	0	0	0.3	0	0	0.2	0	0	0.2			
REC	0	0	0	0	0	0	0	0	0	0	0	0			
REF NO.	QR4502			QR4503			QR4504								
	E	C	B	E	C	B	1	2	3	4	5				
PLAY	0	11.8	0	0	3.6	0	11.9	5.4	4.8	4.2	4.8				
REC	0	0	4.8	0	3.6	0	11.9	5.4	4.8	4.2	4.8				
REF NO.	QR4505			QR4506											
	E	C	B	E	C	B									
PLAY	0	0	0	0	0	5.0									
REC	0	0	0	0	0	5.0									

HEAD AMP SCHEMATIC DIAGRAM (E12: Page CBA-10)



1
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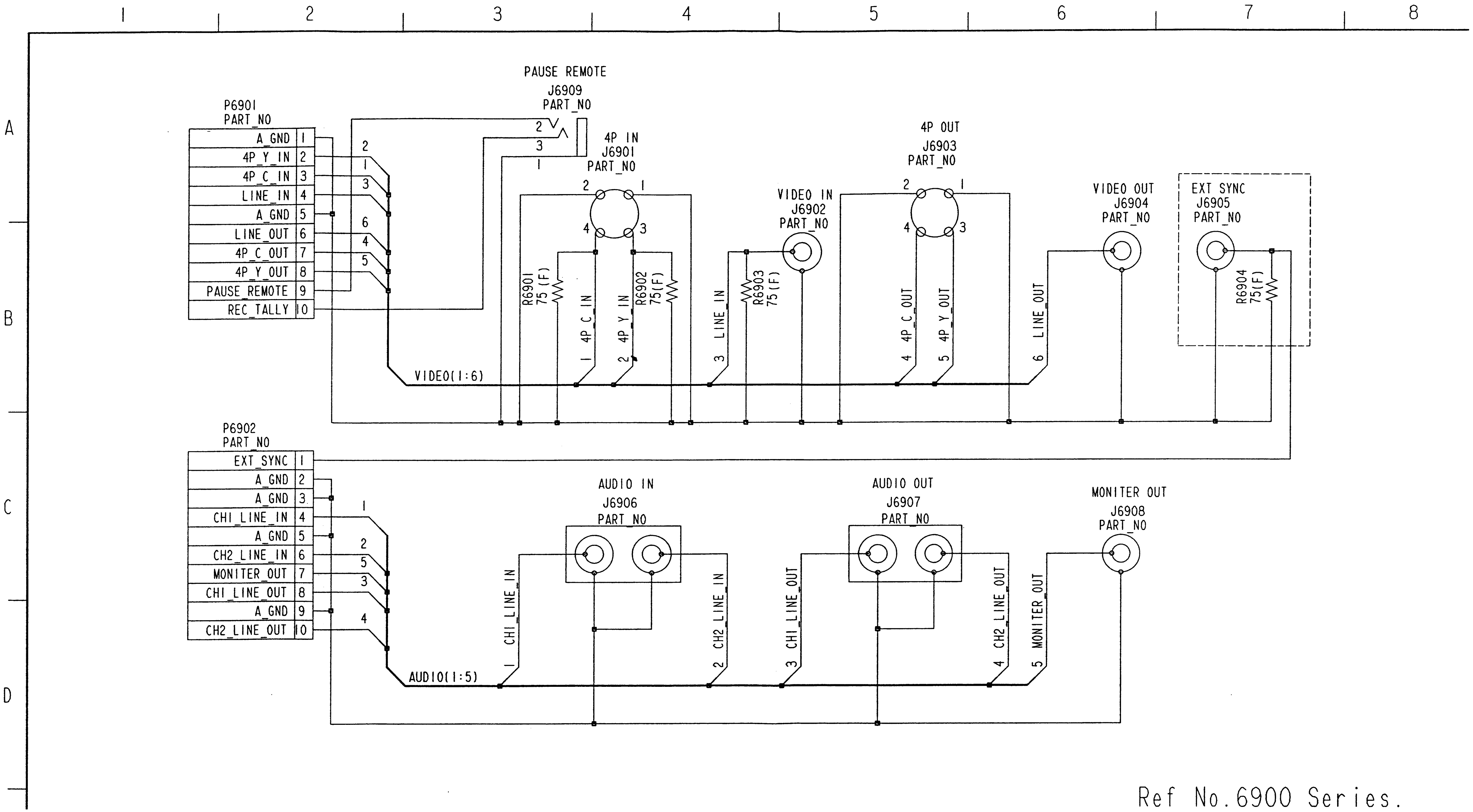
8
9
10
A
B
C
D
E
F
G
H
P5001
GND
REC Y
GND
REC C
RF C
H.A.SW
GND
RF Y
ENV.SEL
HSW
PLAY 5V
P5003 VJP3091
HIFI D REC(L)
TRIC (H)
REC 12V
REC IN
GND
RF OUT
5V
GND
A.HSW
SH (H)
TL MODE(H)(D140)
FLYING E(H)(D117,118)
V.REC 12V(D191)
IC5002
BA7740FS
IC5001
AN3334K
IC5003
AN3370
Q5003
XN4504-TW
Q5005
2SC2206
Q5004
2SC2295
Q5002
2SC2295
D5004
MA151K-TW
D5001
MA151K
D5002
MA151K
DS001
MSB709
DR5001
NRN1404
VR5001
2KB
VR5002
2KB
L5001
100U
L5002
100u
L5003
100u
L5004
100u
L5007
100u
L5008
5R6u
TP5001
REC
HF
TP5002 (L)
TP5003 (H)
P5002
L' HEAD
COM.HEAD
R' HEAD
NOR R HEAD
COM.HEAD
NOR L HEAD
G N D
A.HEAD L
A.HEAD C
A.HEAD R
FLY_E HEAD
FLY_E GND

*-REFER TO THE COMPARISON CHART

Ref No.5000 Series.

REAR JACK SCHEMATIC DIAGRAM (E13: Page CBA-12)


1
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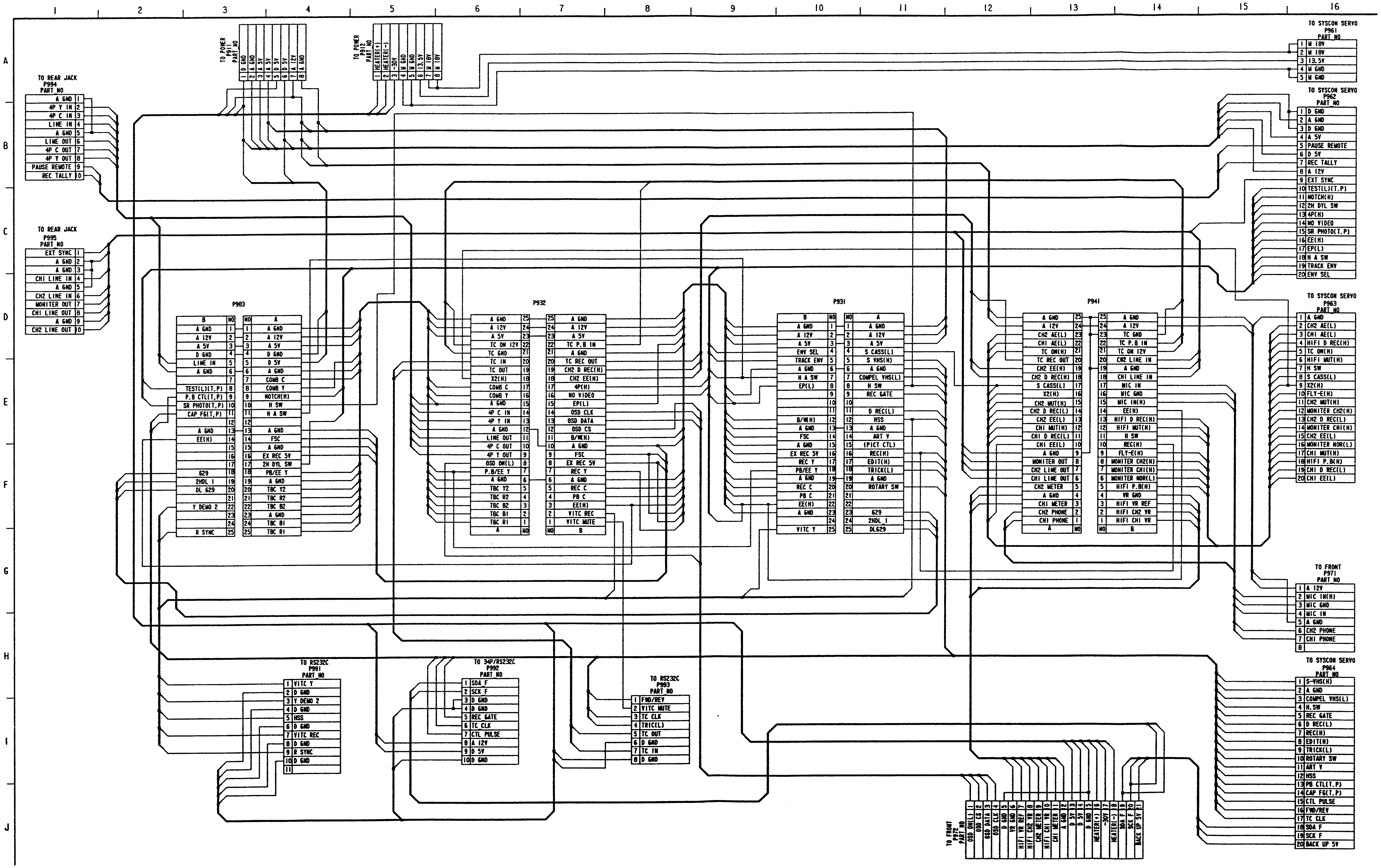
3
4
5
6
7
8
A
B
C
D
PAUSE REMOTE
J6909
PART_NO
P6901
PART_NO
A_GND 1
4P_Y_IN 2
4P_C_IN 3
LINE_IN 4
A_GND 5
LINE_OUT 6
4P_C_OUT 7
4P_Y_OUT 8
PAUSE_REMOTE 9
REC_TALLY 10
4P IN
J6901
PART_NO
VIDEO IN
J6902
PART_NO
4P OUT
J6903
PART_NO
VIDEO OUT
J6904
PART_NO
EXT SYNC
J6905
PART_NO
R6901
75(F)
R6902
75(F)
R6903
75(F)
R6904
75(F)
1 4P_C_IN
2 4P_Y_IN
3 LINE_IN
4 4P_C_OUT
5 4P_Y_OUT
6 LINE_OUT
VIDEO(1:6)
P6902
PART_NO
EXT_SYNC 1
A_GND 2
A_GND 3
CH1_LINE_IN 4
A_GND 5
CH2_LINE_IN 6
MONITER_OUT 7
CH1_LINE_OUT 8
A_GND 9
CH2_LINE_OUT 10
AUDIO IN
J6906
PART_NO
AUDIO OUT
J6907
PART_NO
MONITER OUT
J6908
PART_NO
1 CH1_LINE_IN
2 CH2_LINE_IN
3 CH1_LINE_OUT
4 CH2_LINE_OUT
5 MONITER_OUT
AUDIO(1:5)

Ref No.6900 Series.

MOTHER SCHEMATIC DIAGRAM (E9: Page CBA-11)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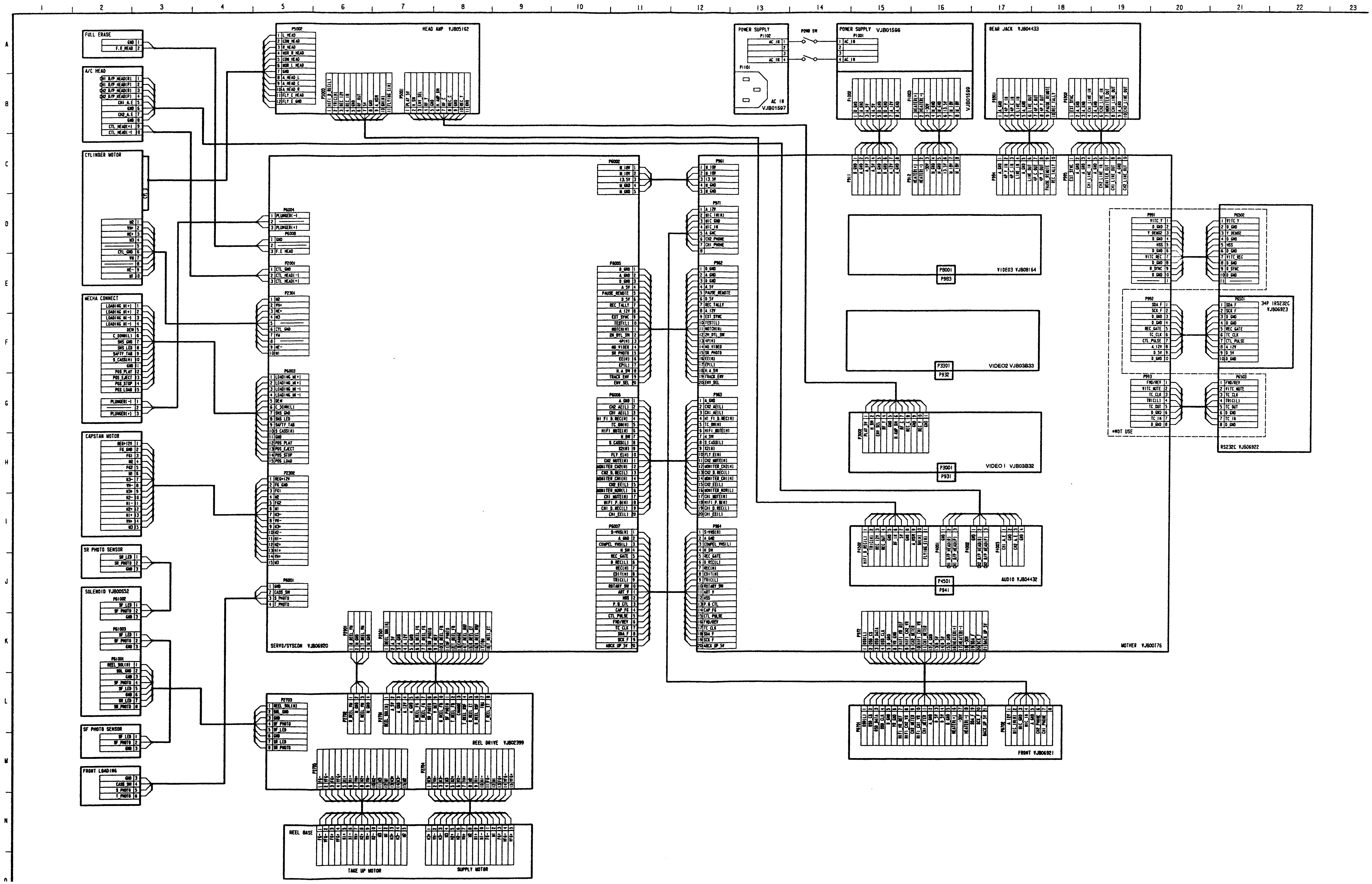
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
TO POWER
P911
PART NO
1 D GND
2 A GND
3 A 5V
4 A 5V
5 D 5V
6 D 5V
7 A 12V
8 A GND
TO POWER
P912
PART NO
1 HEATER(+)
2 HEATER(-)
3 -30V
4 M GND
5 M GND
6 13.5V
7 M 18V
8 M 18V
TO REAR JACK
P994
PART NO
A GND 1
4P Y IN 2
4P C IN 3
LINE IN 4
A GND 5
LINE OUT 6
4P C OUT 7
4P Y OUT 8
PAUSE REMOTE 9
REC TALLY 10
TO REAR JACK
P995
PART NO
EXT SYNC 1
A GND 2
A GND 3
CH1 LINE IN 4
A GND 5
CH2 LINE IN 6
MONITER OUT 7
CH1 LINE OUT 8
A GND 9
CH2 LINE OUT 10
P983
B NO NO A
A GND 1 1 A GND
A 12V 2 2 A 12V
A 5V 3 3 A 5V
D GND 4 4 D GND
LINE IN 5 5 D 5V
A GND 6 6 A GND
7 7 COMB C
TEST(L)(T.P) 8 8 COMB Y
P.B CTL(T.P) 9 9 NOTCH(H)
SR PHOTO(T.P) 10 10 H SW
CAP FG(T.P) 11 11 H A SW
12 12
A GND 13 13 A GND
EE(H) 14 14 FSC
15 15 A GND
16 16 EX REC 5V
17 17 2H DYL SW
629 18 18 PB/EE Y
2HDL 1 19 19 A GND
DL 629 20 20 TBC Y2
21 21 TBC R2
Y DEMO 2 22 22 TBC B2
23 23 A GND
24 24 TBC B1
R SYNC 25 25 TBC R1
P932
A GND 25 25 A GND
A 12V 24 24 A 12V
A 5V 23 23 A 5V
TC ON 12V 22 22 TC P.B IN
TC GND 21 21 A GND
TC IN 20 20 TC REC OUT
TC OUT 19 19 CH2 D REC(H)
X2(H) 18 18 CH2 EE(H)
COMB C 17 17 4P(H)
COMB Y 16 16 NO VIDEO
A GND 15 15 EP(L)
4P C IN 14 14 OSD CLK
4P Y IN 13 13 OSD DATA
A GND 12 12 OSD CS
LINE OUT 11 11 B/W(H)
4P C OUT 10 10 A GND
4P Y OUT 9 9 FSC
OSD ON(L) 8 8 EX REC 5V
P.B/EE Y 7 7 REC Y
A GND 6 6 A GND
TBC Y2 5 5 REC C
TBC R2 4 4 PB C
TBC B2 3 3 EE(H)
TBC B1 2 2 VITC REC
TBC R1 1 1 VITC MUTE
A NO NO B
P931
B NO NO A
A GND 1 1 A GND
A 12V 2 2 A 12V
A 5V 3 3 A 5V
ENV SEL 4 4 S CASS(L)
TRACK ENV 5 5 S VHS(H)
A GND 6 6 A GND
H A SW 7 7 COMPEL VHS(L)
EP(L) 8 8 H SW
9 9 REC GATE
10 10
11 11 D REC(L)
B/W(H) 12 12 HSS
A GND 13 13 A GND
FSC 14 14 ART V
A GND 15 15 (PICT CTL)
EX REC 5V 16 16 REC(H)
REC Y 17 17 EDIT(H)
PB/EE Y 18 18 TRICK(L)
A GND 19 19 A GND
REC C 20 20 ROTARY SW
PB C 21 21
EE(H) 22 22
A GND 23 23 629
24 24 2HDL_1
VITC Y 25 25 DL629
P941
A GND 25 25 A GND
A 12V 24 24 A 12V
CH2 AE(L) 23 23 TC GND
CH1 AE(L) 22 22 TC P.B IN
TC ON(H) 21 21 TC ON 12V
TC REC OUT 20 20 CH2 LINE IN
CH2 EE(H) 19 19 A GND
CH2 D REC(H) 18 18 CH1 LINE IN
S CASS(L) 17 17 MIC IN
X2(H) 16 16 MIC GND
CH2 MUT(H) 15 15 MIC IN(H)
CH2 D REC(L) 14 14 EE(H)
CH2 EE(L) 13 13 HIFI D REC(H)
CH1 MUT(H) 12 12 HIFI MUT(H)
CH1 D REC(L) 11 11 H SW
CH1 EE(L) 10 10 REC(H)
A GND 9 9 FLY-E(H)
MONITER OUT 8 8 MONITER CH2(H)
CH2 LINE OUT 7 7 MONITER CH1(H)
CH1 LINE OUT 6 6 MONITER NOR(L)
CH2 METER 5 5 HIFI P.B(H)
A GND 4 4 VR GND
CH1 METER 3 3 HIFI VR REF
CH2 PHONE 2 2 HIFI CH2 VR
CH1 PHONE 1 1 HIFI CH1 VR
A NO NO B
TO SYSCON SERVO
P961
PART NO
1 M 18V
2 M 18V
3 13.5V
4 M GND
5 M GND
TO SYSCON SERVO
P962
PART NO
1 D GND
2 A GND
3 D GND
4 A 5V
5 PAUSE REMOTE
6 D 5V
7 REC TALLY
8 A 12V
9 EXT SYNC
10 TEST(L)(T.P)
11 NOTCH(H)
12 2H DYL SW
13 4P(H)
14 NO VIDEO
15 SR PHOTO(T.P)
16 EE(H)
17 EP(L)
18 H A SW
19 TRACK ENV
20 ENV SEL
TO SYSCON SERVO
P963
PART NO
1 A GND
2 CH2 AE(L)
3 CH1 AE(L)
4 HIFI D REC(H)
5 TC ON(H)
6 HIFI MUT(H)
7 H SW
8 S CASS(L)
9 X2(H)
10 FLY-E(H)
11 CH2 MUT(H)
12 MONITER CH2(H)
13 CH2 D REC(L)
14 MONITER CH1(H)
15 CH2 EE(L)
16 MONITER NOR(L)
17 CH1 MUT(H)
18 HIFI P.B(H)
19 CH1 D REC(L)
20 CH1 EE(L)
TO FRONT
P971
PART NO
1 A 12V
2 MIC IN(H)
3 MIC GND
4 MIC IN
5 A GND
6 CH2 PHONE
7 CH1 PHONE
8
TO SYSCON SERVO
P964
PART NO
1 S-VHS(H)
2 A GND
3 COMPEL VHS(L)
4 H.SW
5 REC GATE
6 D REC(L)
7 REC(H)
8 EDIT(H)
9 TRICK(L)
10 ROTARY SW
11 ART V
12 HSS
13 PB CTL(T.P)
14 CAP FG(T.P)
15 CTL PULSE
16 FWD/REV
17 TC CLK
18 SDA F
19 SCK F
20 BACK UP 5V
TO RS232C
P991
PART NO
1 VITC Y
2 D GND
3 Y DEMO 2
4 D GND
5 HSS
6 D GND
7 VITC REC
8 D GND
9 R SYNC
10 D GND
11
TO 34P/RS232C
P992
PART NO
1 SDA_F
2 SCK_F
3 D GND
4 D GND
5 REC GATE
6 TC_CLK
7 CTL PULSE
8 A 12V
9 D 5V
10 D GND
TO RS232C
P993
PART NO
1 FWD/REV
2 VITC MUTE
3 TC CLK
4 TRIC(L)
5 TC OUT
6 D GND
7 TC IN
8 D GND
TO FRONT
P972
PART NO
1 OSD ON(L)
2 OSD CS
3 OSD DATA
4 OSD CLK
5 D GND
6 VR GND
7 HIFI VR REF
8 HIFI CH2 VR
9 CH2 METER
10 HIFI CH1 VR
11 CH1 METER
12 A GND
13 D 5V
14 D 5V
15 D GND
16 HEATER(+)
17 -30V
18 HEATER(-)
19 SDA F
20 SCK F
21 BACK UP 5V

INTERCONNECTION SCHEMATIC DIAGRAM


FULL ERASE
A/C HEAD
CYLINDER MOTOR
MECHA CONNECT
CAPSTAN MOTOR
SR PHOTO SENSOR
SOLENOID VJB00552
SF PHOTO SENSOR
FRONT LOADING
HEAD AMP VJB05162
SERVO/SYSCON VJB06920
REEL DRIVE VJB02399
REEL BASE
TAKE UP MOTOR
SUPPLY MOTOR
POWER SUPPLY
POWER SW
POWER SUPPLY VJB01598
AC IN
VJB01597
VJB01599
REAR JACK VJB04433
VIDEO3 VJB08164
VIDEO2 VJB03B33
VIDEO1 VJB03B32
AUDIO VJB04432
MOTHER VJB00176
FRONT VJB06921
34P RS232C VJB06923
RS232C VJB06922
*NOT USE

SECTION 7

CIRCUIT BOARDS

CONTENTS

POWER SUPPLY (1~3) C.B.A. ········ CBA-3
REEL DRIVE C.B.A. ········ CBA-3
FRONT (1~4) C.B.A. ········ CBA-4
SYSTEM CONTROL & SERVO C.B.A. ········ CBA-5
AUDIO C.B.A. ········ CBA-6
VIDEO (1) C.B.A. ········ CBA-7
VIDEO (2) C.B.A. ········ CBA-8
VIDEO (3) C.B.A. ········ CBA-9
FM AUDIO PACK C.B.A. ········ CBA-10
HEAD AMP C.B.A. ········ CBA-10
MOTHER C.B.A. ········ CBA-11
REAR JACK C.B.A. ········ CBA-12

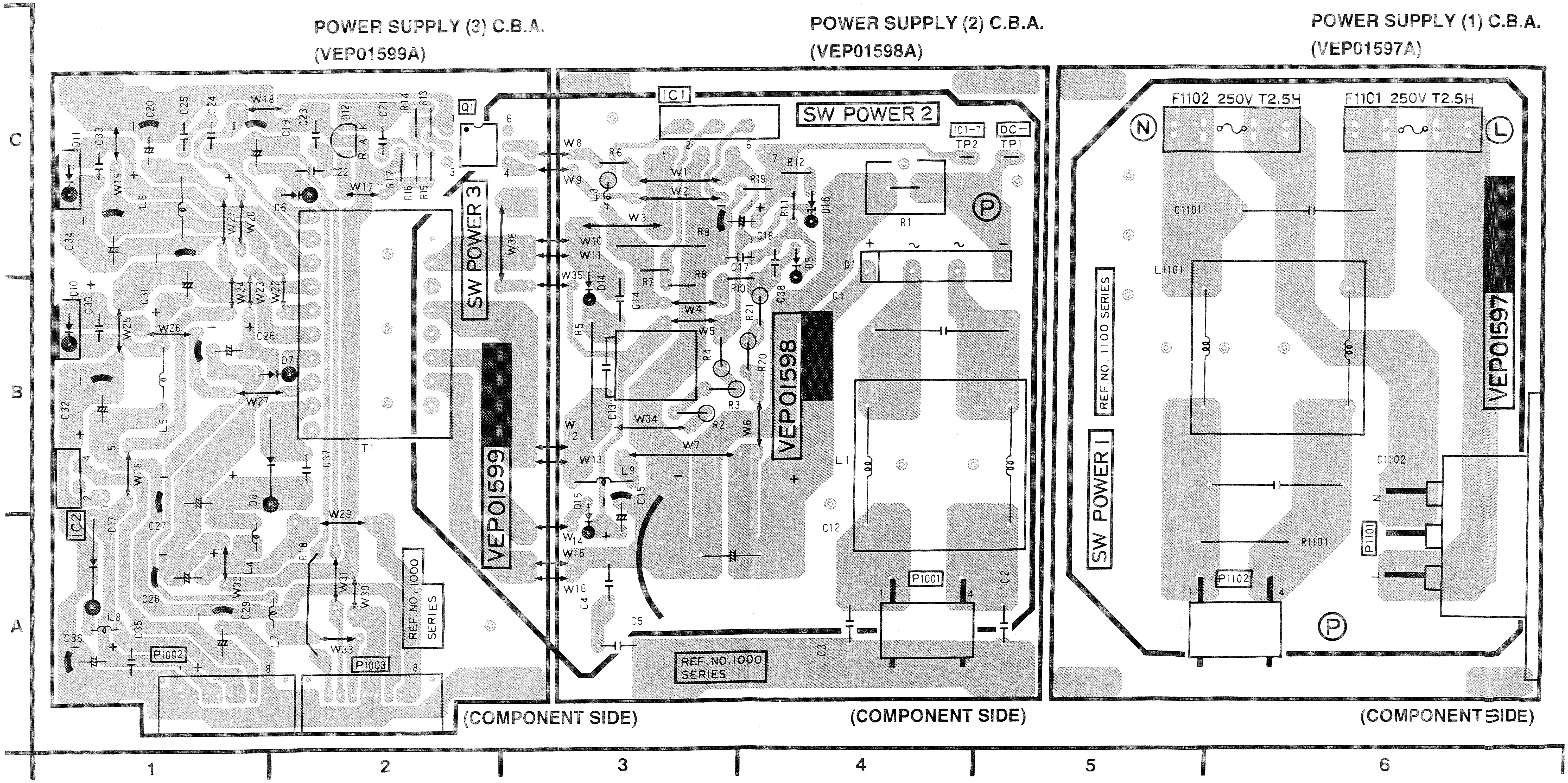
IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE

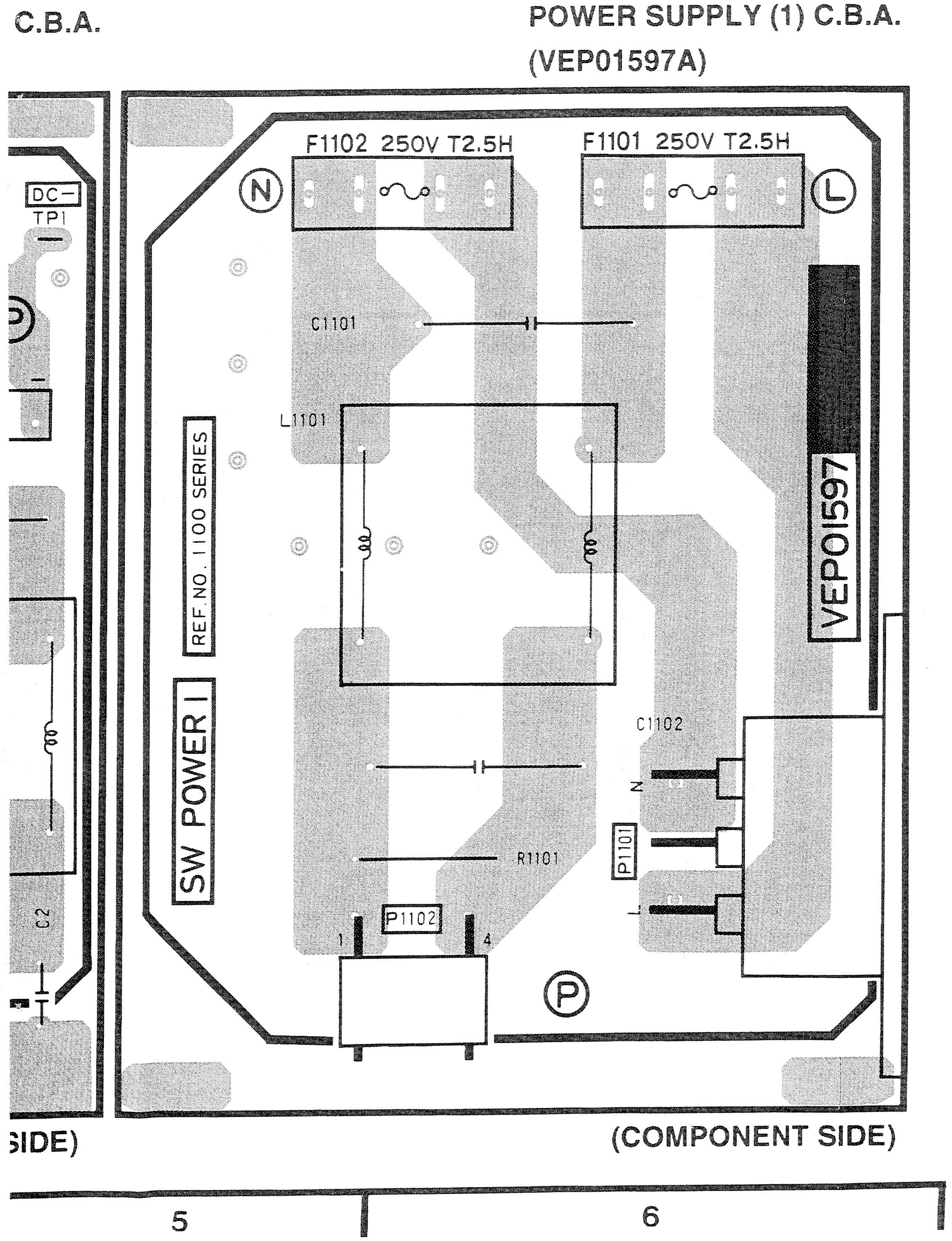
DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

POWER SUPPLY (1) C.B.A. (VEP01597A) / POWER SUPPLY (2) C.B.A. (VEP01598A) / POWER SUPPLY (3) C.B.A. (VEP01599A)



POWER SUPPLY (3) C.B.A.
(VEP01599A)
POWER SUPPLY (2) C.B.A.
(VEP01598A)
POWER SUPPLY (1) C.B.A.
(VEP01597A)
SW POWER 3
VEP01599
SW POWER 2
VEP01598
SW POWER 1
VEP01597
F1102 250V T2.5H
F1101 250V T2.5H
N
L
P
IC1
IC2
IC1-7
TP2
DC-
TP1
Q1
T1
D1
L1
R1
C1
C2
C3
C4
C5
C12
C1101
C1102
L1101
R1101
P1001
P1002
P1003
P1101
P1102
REF. NO. 1000 SERIES
REF. NO. 1100 SERIES
(COMPONENT SIDE)
(COMPONENT SIDE)
(COMPONENT SIDE)
C
B
A
1
2
3
4
5
6

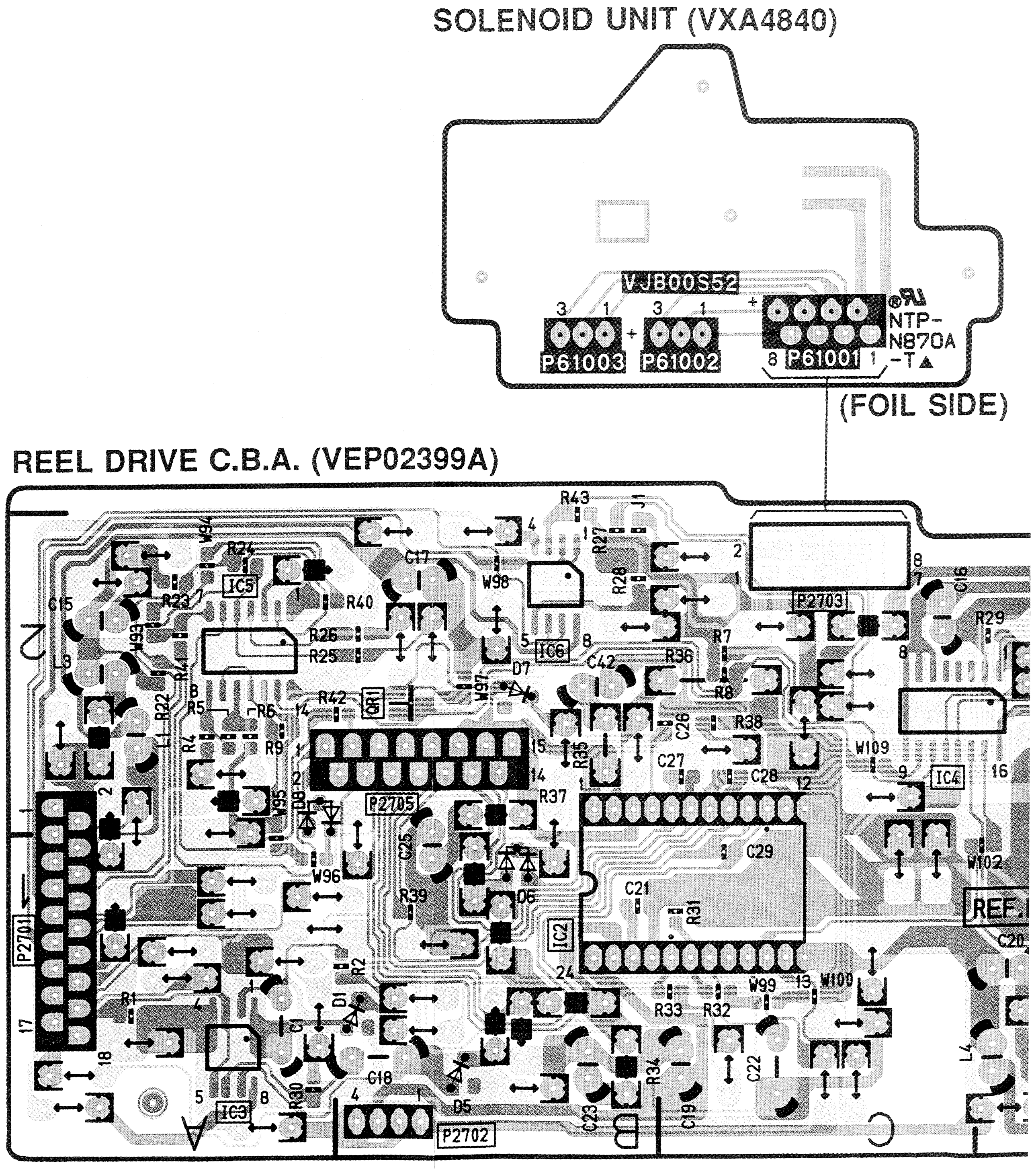
SUPPLY (3) C.B.A. (VEP01599A)


C.B.A.
POWER SUPPLY (1) C.B.A.
(VEP01597A)
DC−
TP1
C2
F1102 250V T2.5H
F1101 250V T2.5H
N
L
C1101
L1101
REF. NO. 1100 SERIES
SW POWER I
VEP01597
C1102
R1101
P1101
P1102
1
4
P
SIDE)
(COMPONENT SIDE)
5
6

POWER	
Transistor	
Q1001	C-2
Integrated Circuit	
IC1001 IC1002	C-3 B-1
Test Point	
TP1001 TP1002	C-5 C-4
Connector	
P1001 P1002 P1003 P1101 P1102	A-4 A-1 A-2 A-6 A-5

ADDRESS INFORMATION

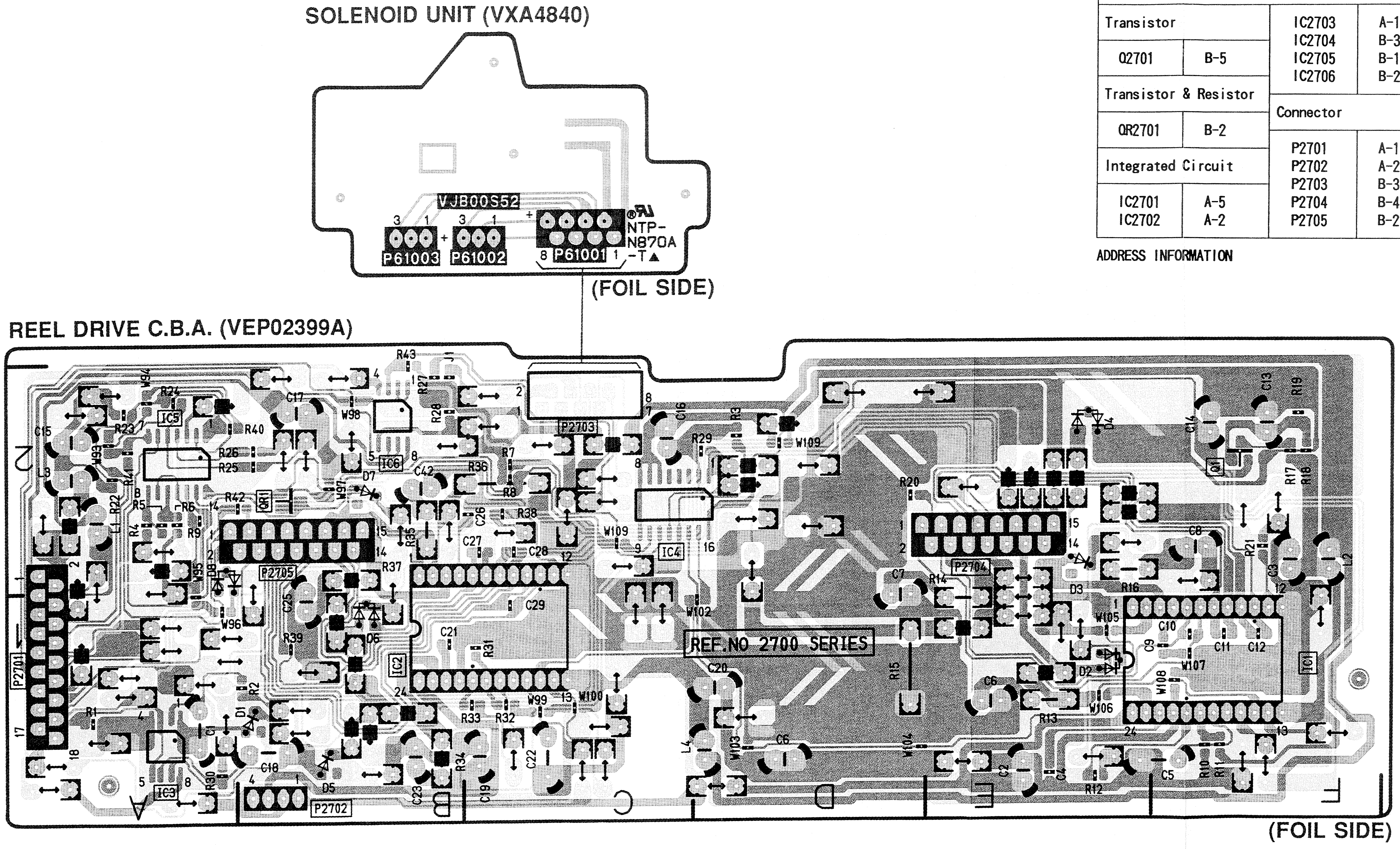
REEL DRIVE C.B.A. (VEP02399A)


SOLENOID UNIT (VXA4840)
VJB00S52
P61003
P61002
P61001
NTP-N870A-T▲
(FOIL SIDE)
REEL DRIVE C.B.A. (VEP02399A)
R43
J1
R27
R28
P2703
C16
R29
R24
W94
IC5
R23
R40
C17
W98
IC6
C42
R36
R7
R8
C15
L3
W93
R41
R22
R26
R25
D7
W97
R42
QR1
R5
R6
R4
R9
L1
P2705
R35
C26
R38
C27
C28
W109
IC4
R37
W95
D8
D6
C25
W96
R39
IC2
C29
C21
R31
W102
REF.
C20
P2701
R2
D1
C1
R1
IC3
R30
C18
D5
P2702
W99
W100
R33
R32
R34
C22
C23
C19
L4
A
B
C
1
2
4
5
8
9
12
13
14
15
16
17
18
24

REEL DRIVE C.B.A. (VEP02399A)

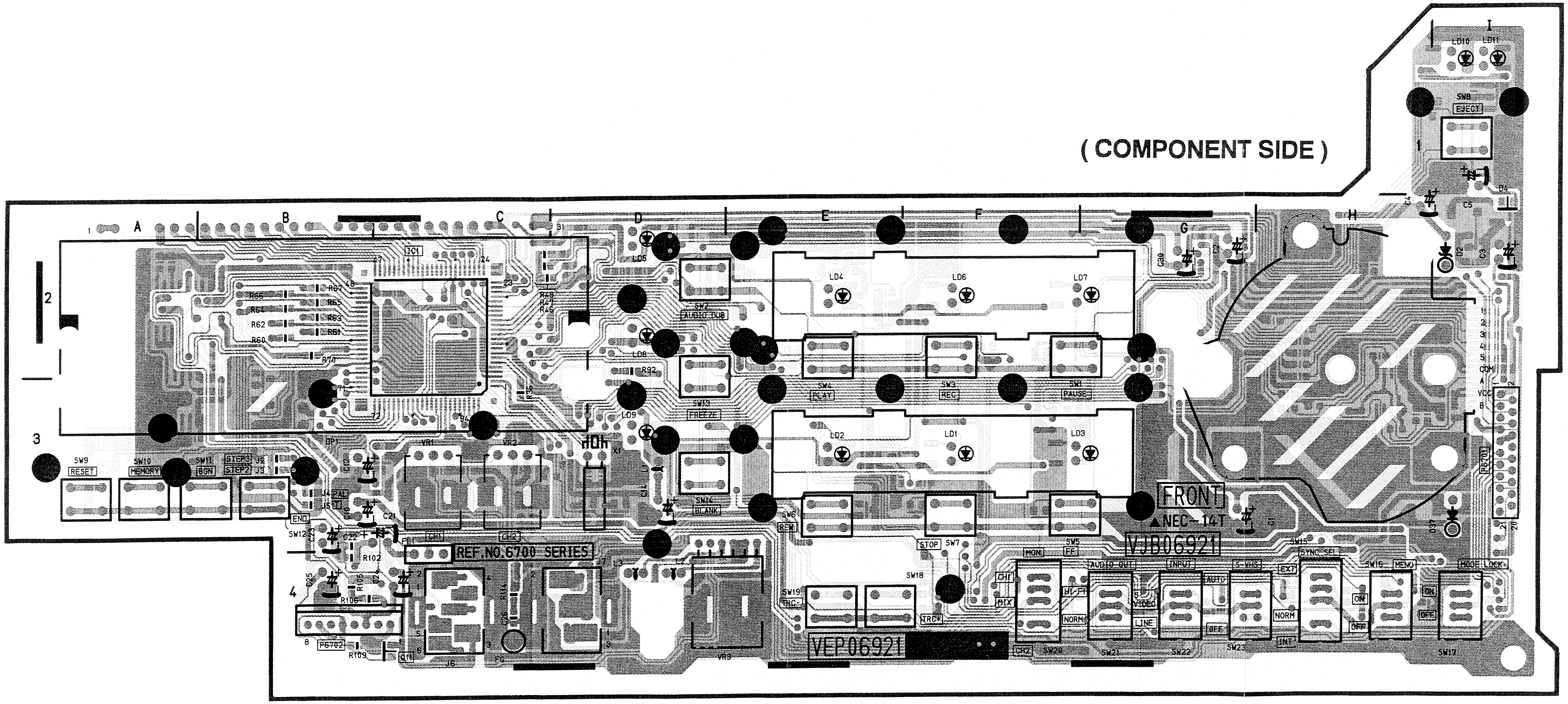
REEL DRIVE			
Transistor		IC2703	A-1
Q2701	B-5	IC2704	B-3
		IC2705	B-1
Transistor & Resistor		IC2706	B-2
QR2701	B-2	Connector	
Integrated Circuit		P2701	A-1
		P2702	A-2
IC2701	A-5	P2703	B-3
IC2702	A-2	P2704	B-4
		P2705	B-2

ADDRESS INFORMATION

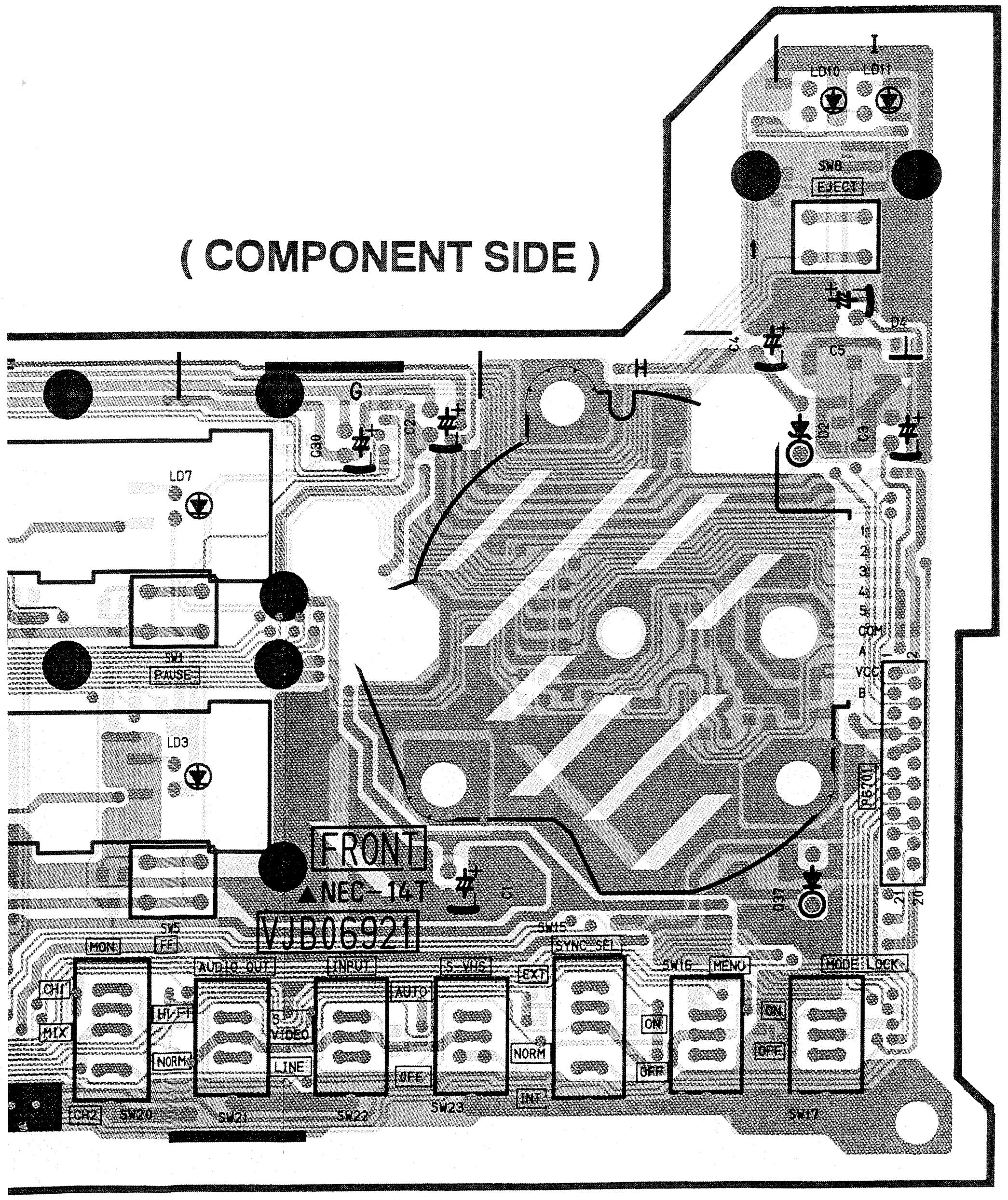

SOLENOID UNIT (VXA4840)
VJB00S52
P61003
P61002
P61001
NTP-N870A-T
(FOIL SIDE)
REEL DRIVE C.B.A. (VEP02399A)
P2701
P2702
P2703
P2704
P2705
IC1
IC2
IC3
IC4
IC5
IC6
QR1
Q1
REF.NO 2700 SERIES
A
B
C
D
E
F
1
2
(FOIL SIDE)

FRONT (1~4) C.B.A. (VEP06921B)

(COMPONENT SIDE)

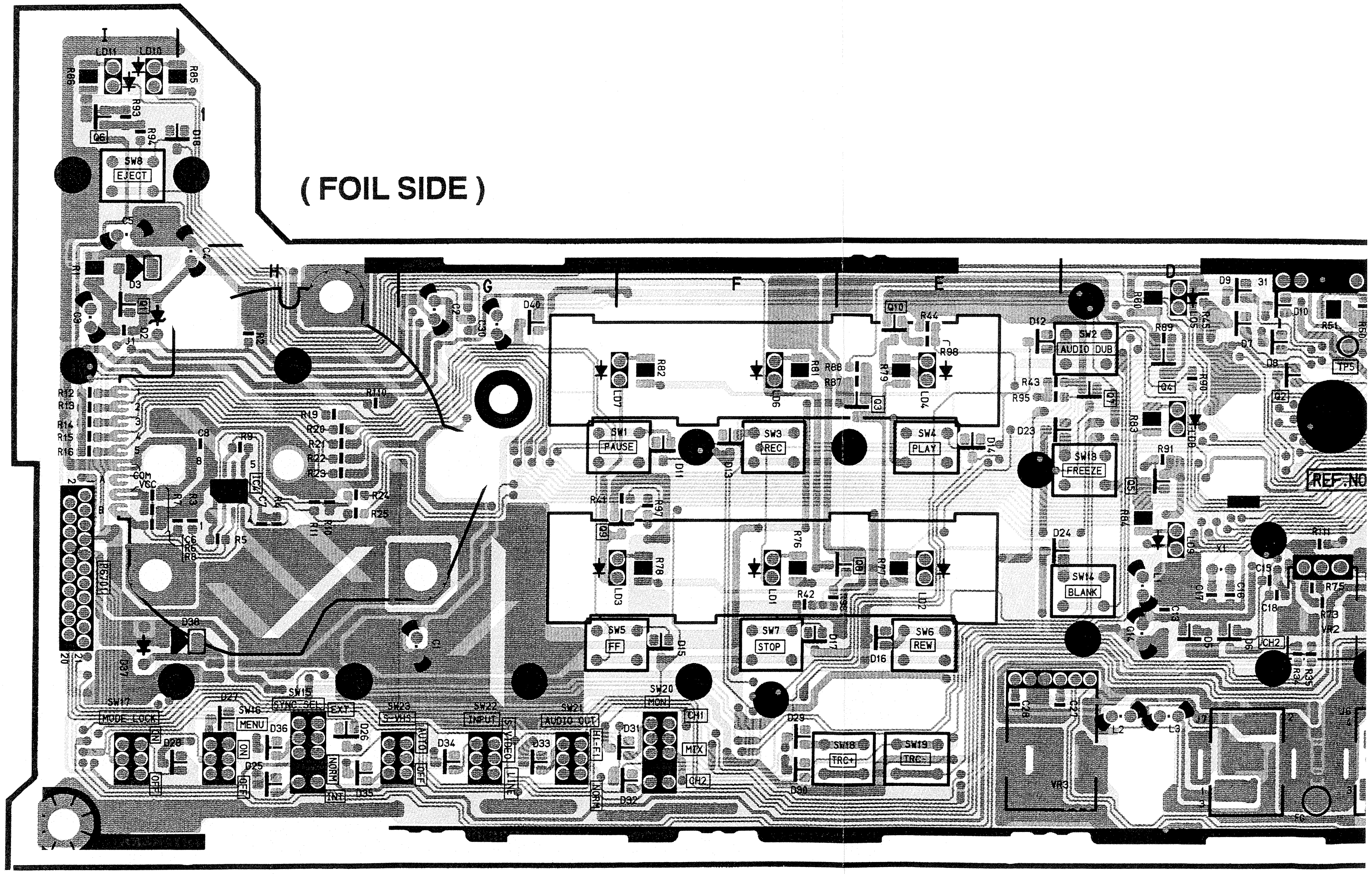

A
B
C
D
E
F
G
H
I
1
2
3
4
IC1
LD1
LD2
LD3
LD4
LD5
LD6
LD7
LD8
LD9
LD10
LD11
SW1 PAUSE
SW2 AUDIO DUB
SW3 REC
SW4 PLAY
SW5 FF
SW6 REW
SW7 STOP
SW8 EJECT
SW9 RESET
SW10 MEMORY
SW11 BGN
SW12 END
SW13 FREEZE
SW14 BLANK
SW15 SYNC SEL
SW16 MENU
SW17 MODE LOCK
SW18
SW19 TRC-
TRC+
SW20 MON
CH1 MIX CH2
SW21 AUDIO OUT
HI-FI NORM
SW22 INPUT
S-VIDEO LINE
SW23 S-VHS
AUTO OFF
EXT NORM INT
ON OFF
VR1
VR2
VR3
CH1
CH2
STEP3
STEP2
PAL
NTSC
FL1
X1
J6
J7
FG
P6701
P6702
REF.NO.6700 SERIES
FRONT
▲NEC-14T
VJB06921
VEP06921
COM
VCC

(COMPONENT SIDE)



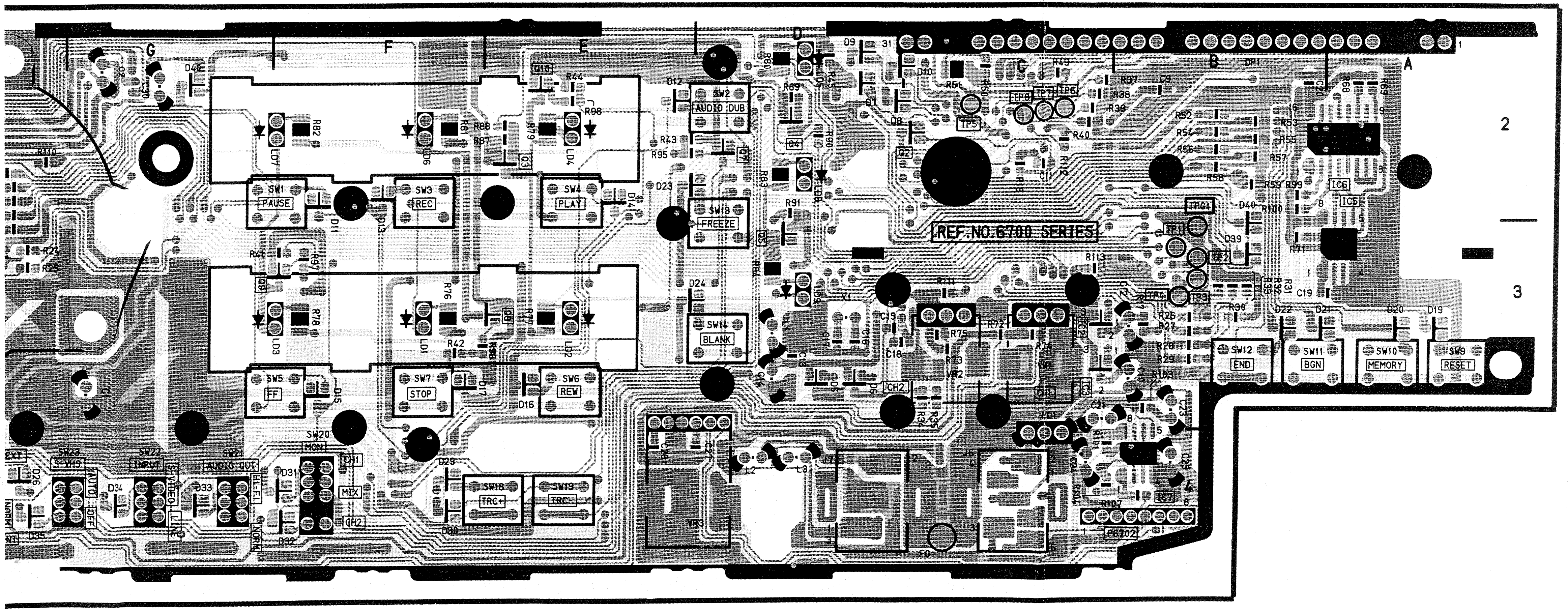
LD10
LD11
SW8
EJECT
C5
D4
C3
G
H
C30
C2
LD7
SW1
PAUSE
LD3
D2
FRONT
▲NEC-14T
VJB06921
C1
D37
CN701
COM
VCC
MON
FF
SW5
CH1
MIX
CH2
HI-FI
NORM
SW20
AUDIO OUT
VIDEO
LINE
SW21
INPUT
SW22
AUTO
OFF
S-VHS
SW23
SW15
SYNC SEL
EXT
NORM
INT
SW16
MENU
ON
OFF
MODE LOCK
SW17

(FOIL SIDE)



I
LD11
LD10
R86
R85
R93
R94
Q6
D18
SW8
EJECT
C5
C4
D3
Q1
D2
J1
C9
G
H
D40
C30
C2
F
E
D
Q10
R44
R98
R82
LD7
R81
R88
R87
LD6
R79
LD4
R43
R95
D12
SW2
AUDIO DUB
R89
Q4
D7
D8
D9
D10
R51
TP5
R12
R13
R14
R15
R16
C8
R9
R19
R20
R21
R22
R23
R24
R25
R110
IC1
R5
R11
IC6
R6
R8
COM
VCC
CN701
SW1
PAUSE
D1
D13
SW3
REC
SW4
PLAY
D14
D23
SW13
FREEZE
Q5
R91
REF.NO
R41
R97
Q9
R78
LD3
R76
LD1
R42
R77
LD2
D24
SW14
BLANK
X1
C15
C16
C18
R75
R73
VR2
D38
D37
SW5
FF
D15
SW7
STOP
D17
D16
SW6
REW
CH2
R35
SW17
MODE LOCK
D28
OFF
D27
SW16
MENU
D36
ON
D25
OFF
SW15
SYNC SEL
EXT
D26
NORM
INT
D35
SW23
S-VHS
AUTO
D34
OFF
SW22
INPUT
VIDEO
D33
LINE
SW21
AUDIO OUT
HI-FI
NORM
D31
D32
SW20
MON
CH1
MIX
CH2
D29
D30
SW18
TRK+
SW19
TRK−
C20
C21
VR3
L2
L3

OIL SIDE)


G
F
E
D
C
B
A
2
3
SW1 PAUSE
SW3 REC
SW4 PLAY
SW2 AUDIO DUB
SW13 FREEZE
SW14 BLANK
SW5 FF
SW7 STOP
SW6 REW
SW12 END
SW11 BGN
SW10 MEMORY
SW9 RESET
REF.NO.6700 SERIES
SW20 MON
MIX
SW23 S-VHS
SW22 INPUT
SW21 AUDIO OUT
SW18 TRC+
SW19 TRC-
VR1
VR2
VR3
P6702
IC7
LD1
LD2
LD3
LD4
LD6
LD7
DP1
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TPG1
X1

FOIL SIDE

FRONT	
Transistor	
Q6701	I-2
Q6702	C-2
Q6703	E-2
Q6704	D-2
Q6705	D-3
Q6706	I-1
Q6707	D-2
Q6708	E-3
Q6709	G-3
Q6710	E-2
Integrated Circuit	
IC6702	C-3
IC6703	C-3
IC6704	H-3
IC6705	A-2
IC6706	A-2
IC6707	B-4
Test Point	
TP6701	B-3
TP6702	B-3
TP6703	B-3
TP6704	B-3
TP6705	C-2
TP6706	C-2
TP6707	C-2
TP6708	C-2
TPG6701	B-3
Adjustment	
VR6701	C-3
VR6702	C-3
VR6703	E-4

ADDRESS INFORMATION

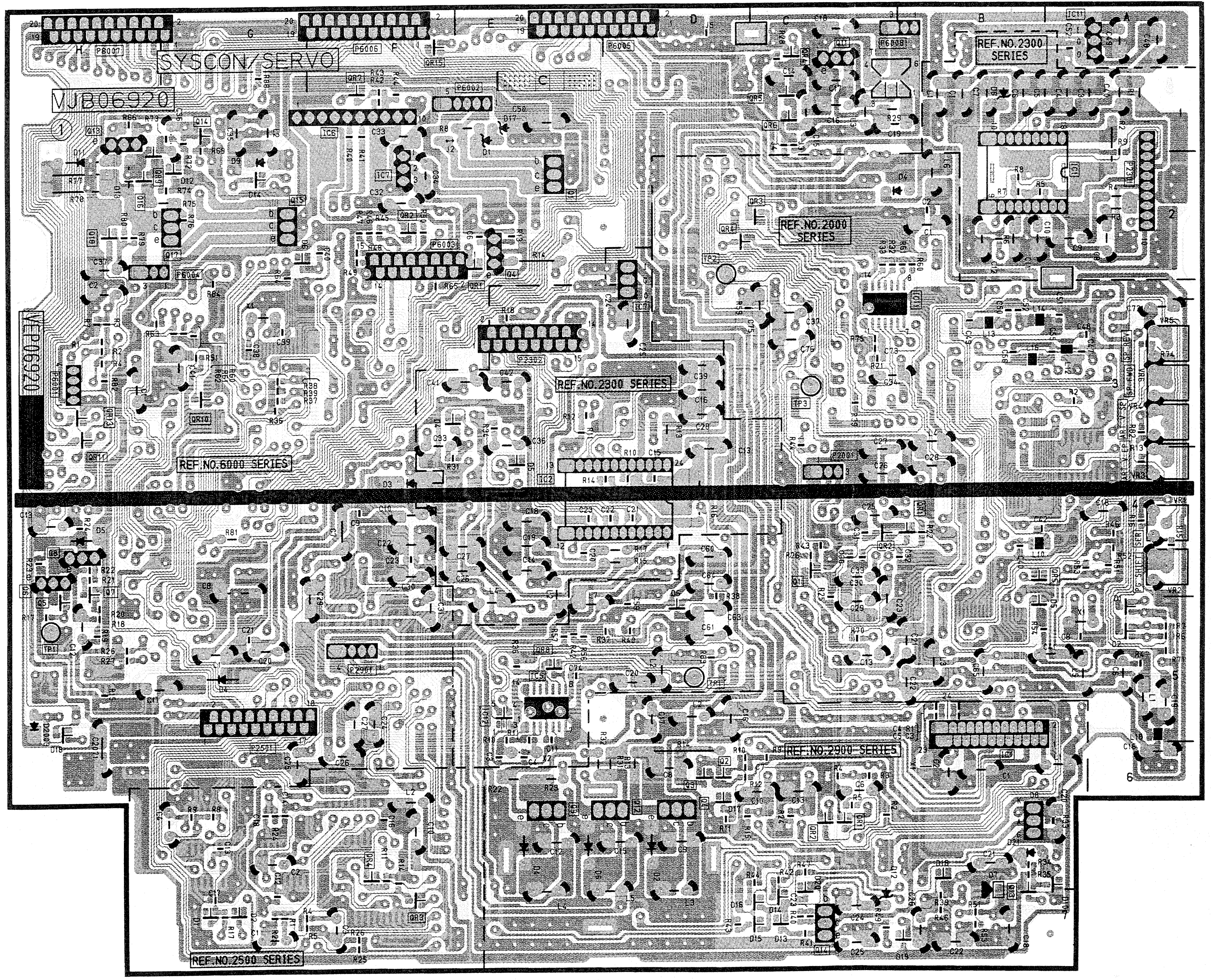
COMPONENT SIDE

FRONT	
Transistor	
Q6711	C-3
Integrated Circuit	
IC6701	C-2
Adjustment	
VR6701	C-3
VR6702	C-3
VR6703	E-4
Connector	
P6701	I-3
P6702	B-4

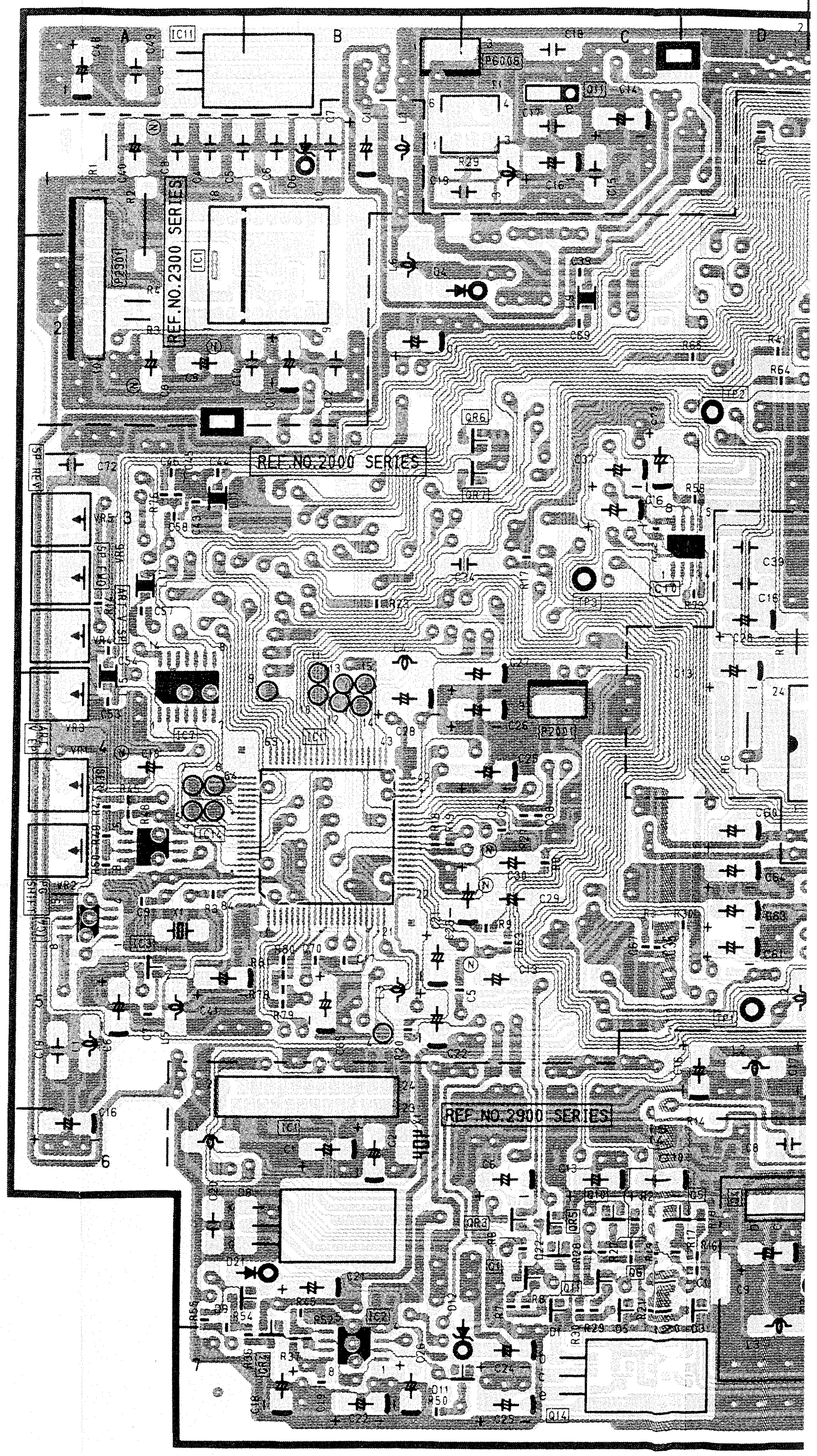
ADDRESS INFORMATION

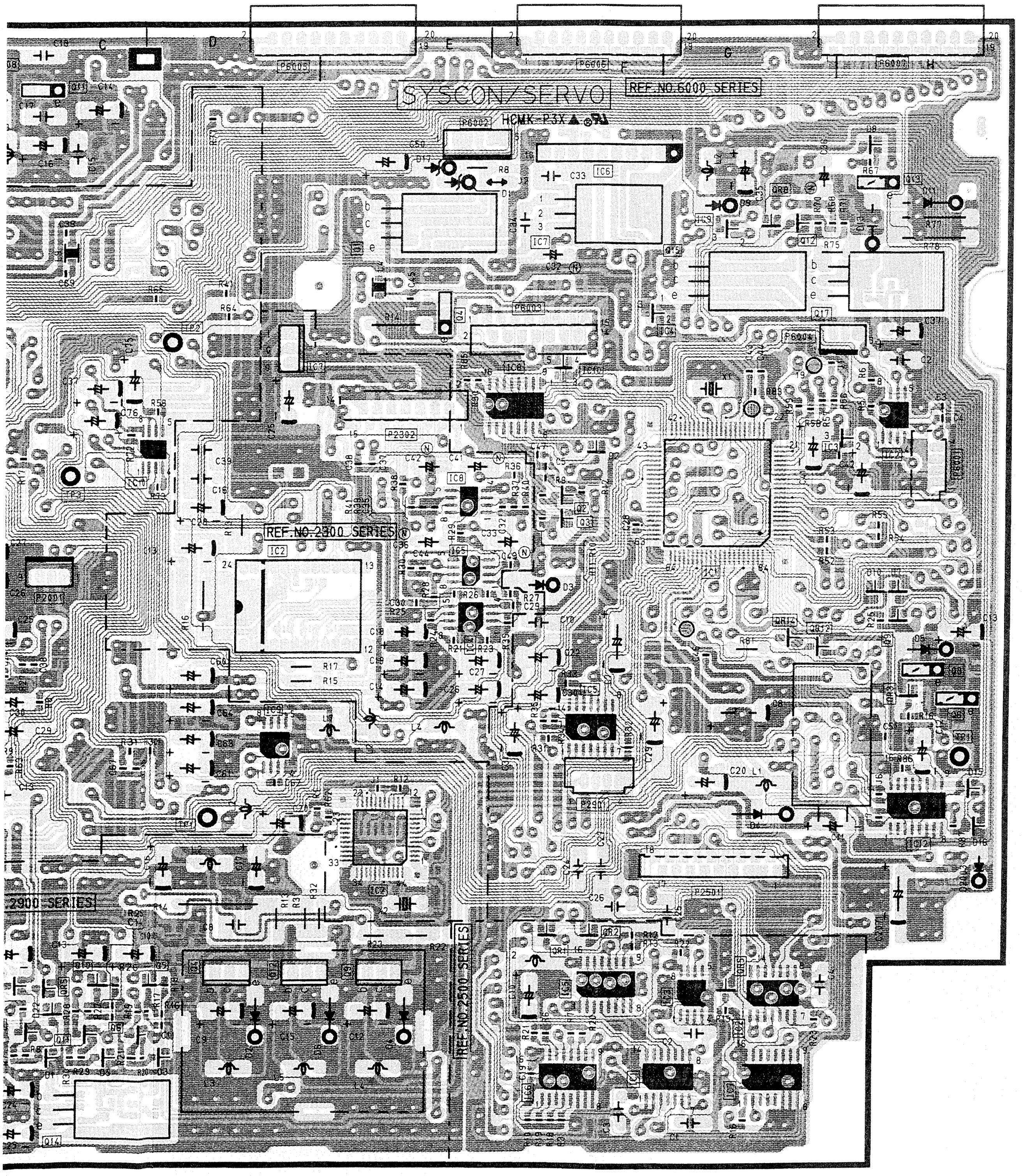
SYSTEM CONTROL & SERVO C.B.A. (VEP06920B)

(FOIL SIDE)


SYSCON/SERVO
VJB06920
VEP06920
REF.NO.2300 SERIES
REF.NO.2000 SERIES
REF.NO.6000 SERIES
REF.NO.2900 SERIES
REF.NO.2500 SERIES
P6007
P6006
P6005
P6008
P6002
P6003
P6004
P2302
P2001
P2901
P2501
IC1
IC2
IC5
IC6
IC7
IC11
TP1
TP2
TP3

(COMPONENT SIDE)


REF.NO.2300 SERIES
REF.NO.2000 SERIES
REF.NO.2900 SERIES
IC11
IC1
P6008
P2001



COMPONENT SIDE

SYSTEM CONTROL & SERVO

Transistor	
Q2901	C-6
Q2904	D-6
Q2905	D-6
Q2906	C-6
Q2909	E-6
Q2910	C-6
Q2911	C-6
Q2912	D-6
Q2914	C-7
Q6001	E-2
Q6002	F-3
Q6003	F-3
Q6004	E-2
Q6006	H-4
Q6008	H-4
Q6009	H-4
Q6011	C-1
Q6012	G-2
Q6013	H-1
Q6015	G-2
Q6017	H-2

Transistor & Resistor	
QR2006	C-2
QR2007	C-3
QR2501	F-6
QR2502	F-6
QR2505	G-6
QR2903	C-6
QR2904	B-7
QR2905	C-6
QR6003	H-3
QR6008	G-2
QR6012	G-4
QR6014	G-4

Integrated Circuit	
IC2001	A-4
IC2001	B-4
IC2002	E-5
IC2003	A-5
IC2004	A-5
IC2009	D-4
IC2014	A-4
IC2302	D-4
IC2304	E-4
IC2305	E-4
IC2307	D-2
IC2308	E-3
IC2501	G-7
IC2502	G-6
IC2503	G-6
IC2505	F-6
IC2506	F-6
IC2507	G-7
IC2901	B-5
IC2902	B-7
IC6001	A-2
IC6001	G-3
IC6002	H-3
IC6003	H-3
IC6005	F-4
IC6006	F-1
IC6007	F-2
IC6008	F-3
IC6009	G-2
IC6010	F-3
IC6011	A-1
IC6012	H-5

Test Point	
TP2001	D-5
TP2002	D-2
TP2003	C-3

Adjustment	
VR2001	A-4
VR2002	A-4
VR2003	A-4
VR2004	A-3
VR2005	A-3
VR2006	A-3

Connector	
P2001	C-4
P2301	A-2
P2302	E-3
P2501	G-5
P2901	F-5
P6001	H-3
P6002	E-1
P6003	F-2
P6004	H-2
P6005	D-1
P6006	F-1
P6007	H-1
P6008	B-1

ADDRESS INFORMATION

FOIL SIDE

SYSTEM CONTROL & SERVO

Transistor	
Q2001	C-4
Q2902	E-6
Q2903	E-6
Q2904	E-6
Q2909	E-6
Q2912	E-6
Q2913	B-6
Q2914	C-7
Q6001	E-2
Q6004	E-2
Q6005	H-4
Q6006	H-4
Q6007	H-4
Q6008	H-4
Q6011	C-1
Q6013	H-1
Q6014	G-1
Q6015	G-2
Q6016	H-2
Q6017	G-2
Q6018	H-2

Transistor & Resistor	
QR2001	B-4
QR2002	C-4
QR2003	C-2
QR2004	D-2
QR2005	A-4
QR2008	E-5
QR2503	F-7
QR2504	F-6
QR2901	C-6
QR2902	C-6
QR6001	E-2
QR6002	F-2
QR6004	C-1
QR6005	C-1
QR6006	C-1
QR6007	F-1
QR6009	H-2
QR6010	G-3
QR6011	H-3
QR6013	H-3
QR6015	F-1

Integrated Circuit	
IC2005	E-5
IC2011	C-3
IC2012	E-5
IC2301	B-2
IC2302	E-4
IC2307	D-2
IC2901	B-5
IC6001	A-1
IC6006	F-1
IC6007	F-2

Test Point	
TP2001	D-5
TP2002	D-2
TP2003	C-3
TP6001	H-5

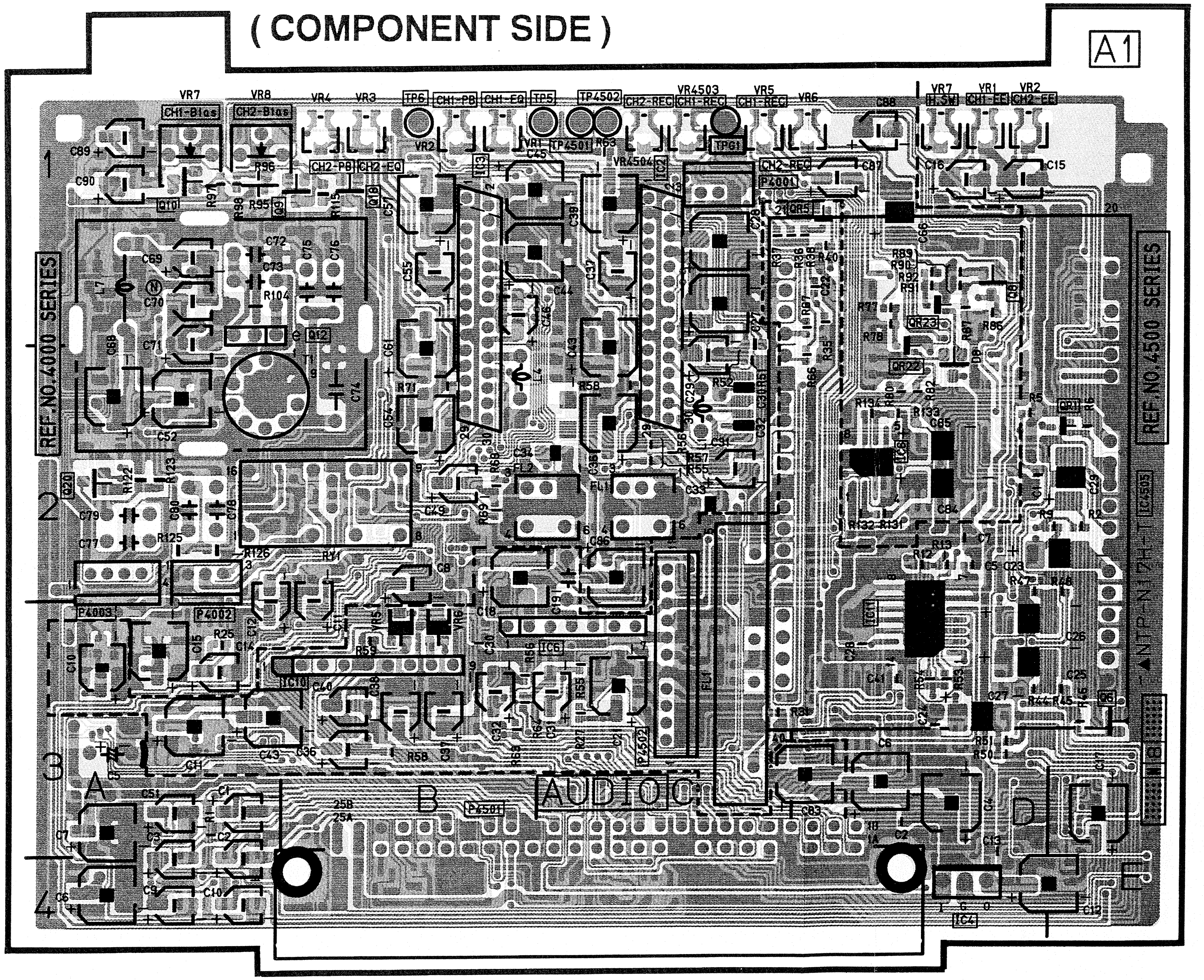
Adjustment	
VR2001	A-4
VR2002	A-4
VR2003	A-4
VR2004	A-3
VR2005	A-3
VR2006	A-3

Connector	
P2001	C-4
P2301	A-2
P2302	E-3
P2501	G-5
P2901	F-5
P6001	H-3
P6002	E-1
P6003	F-2
P6004	H-2
P6005	E-1
P6006	F-1
P6007	H-1
P6008	C-1

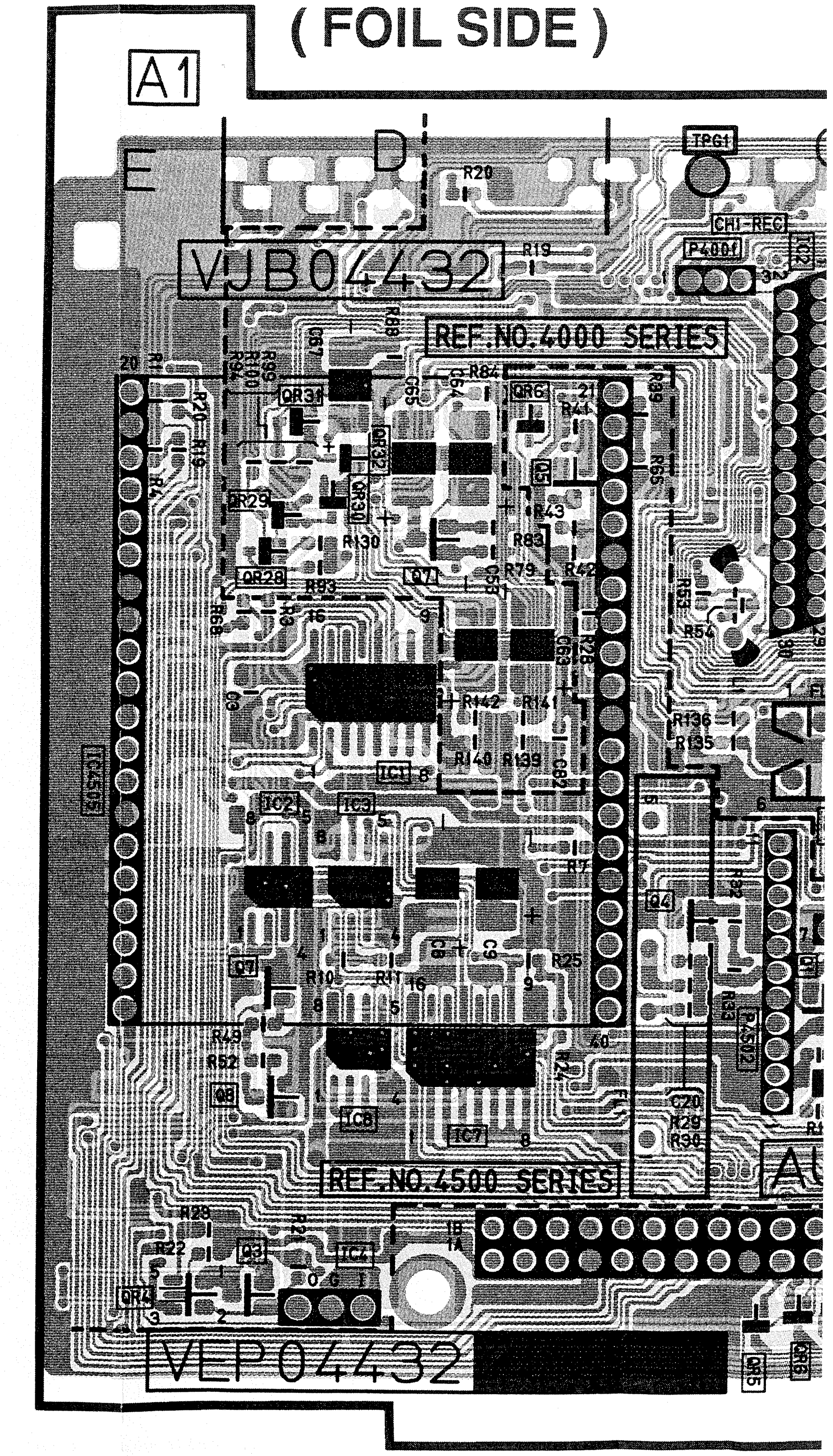
ADDRESS INFORMATION

AUDIO C.B.A. (VEP04432B)

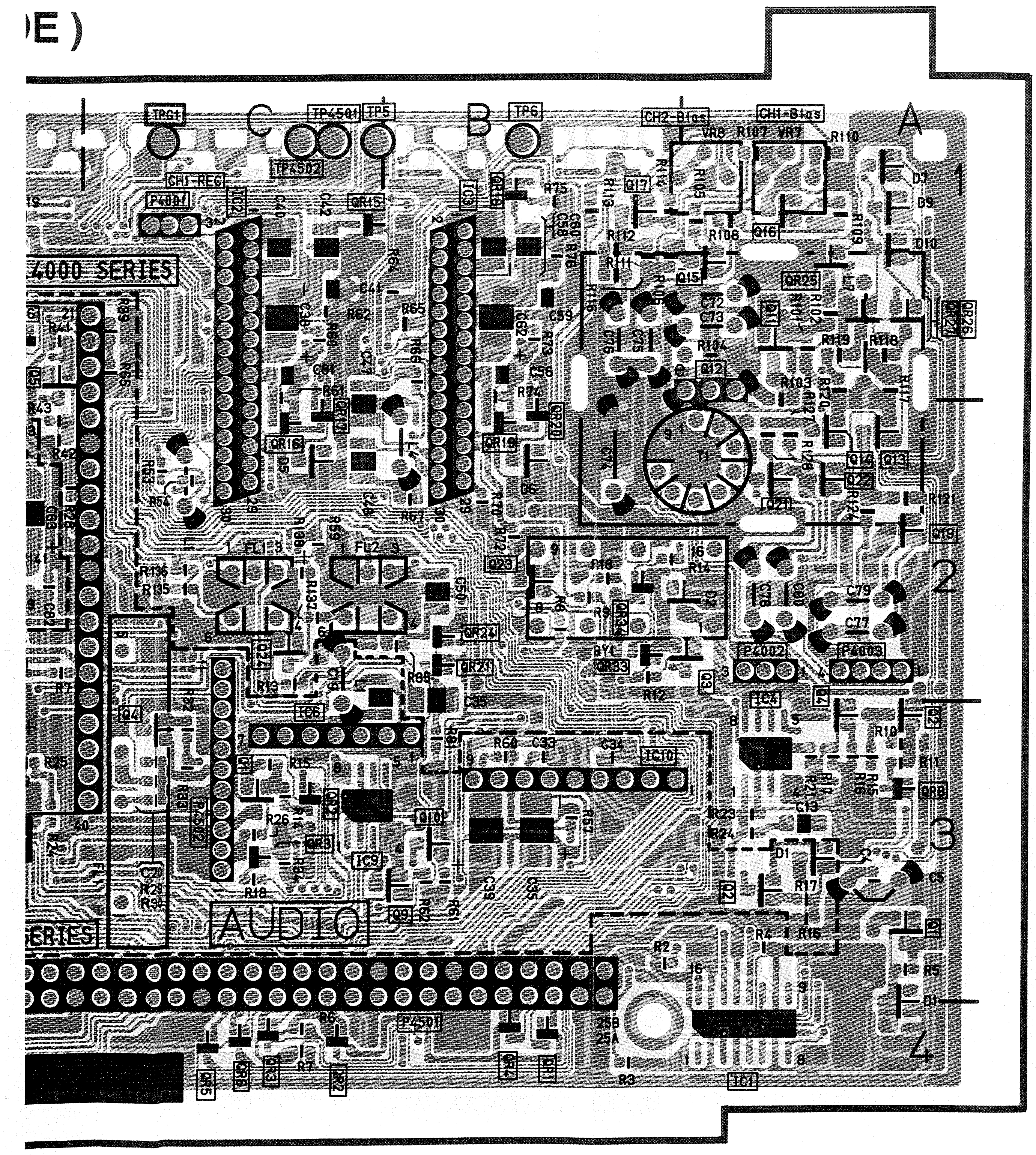
(COMPONENT SIDE)


A1
VR7
CH1-Bias
VR8
CH2-Bias
VR4
VR3
TP6
CH1-PB
CH1-EQ
TP5
TP4502
CH2-REC
VR4503
CH1-REC
VR5
CH1-REC
VR6
C88
VR7
H.SW
VR1
CH1-EE
VR2
CH2-EE
TP4501
R63
TPG1
CH2-PB
CH2-EQ
CH2-REC
P4001
C16
C15
REF.NO.4000 SERIES
REF.NO.4500 SERIES
1
2
3
4
A
B
C
D
E
P4003
P4002
P4501
P2502
IC4
IC6
IC10
IC1
IC4505
NTP-N12H-T
AUDIO C

(FOIL SIDE)


A1
E
D
TPG1
VJB04432
REF.NO.4000 SERIES
CH1-REC
P4001
IC1
IC2
IC3
IC6
IC7
REF.NO.4500 SERIES
VEP04432

E)


A
B
C
1
2
3
4
TPG1
TP4501
TP5
TP6
TP4502
CH1-REC
P4001
CH2-Bias
CH1-Bias
VR8
R107
VR7
R110
4000 SERIES
FL1
FL2
T1
P4002
P4003
IC4
IC6
IC9
IC10
IC1
AUDIO
P4502
P4501
SERIES

FOIL SIDE

AUDIO 1

Transistor

Q4001	A-3
Q4002	A-3
Q4003	A-2
Q4004	A-3
Q4007	D-2
Q4011	A-1
Q4012	A-1
Q4013	A-2
Q4014	A-2
Q4015	A-1
Q4016	A-1
Q4017	B-1
Q4019	A-2
Q4021	A-2
Q4022	A-2
Q4023	B-2
Q4024	C-2
Q4501	C-3
Q4502	A-3
Q4503	D-4
Q4504	C-3
Q4505	D-1
Q4507	D-3
Q4508	D-3
Q4509	B-3
Q4510	B-3

Transistor & Resistor

QR4001	B-4
QR4002	C-4
QR4003	C-4
QR4004	B-4
QR4005	C-4
QR4006	C-4
QR4008	A-3
QR4015	C-1
QR4016	C-2
QR4017	C-2
QR4018	B-1
QR4019	B-2
QR4020	B-2
QR4021	B-2
QR4024	B-2
QR4025	A-1
QR4026	A-1
QR4027	A-1
QR4028	D-2
QR4029	D-2
QR4030	D-2
QR4031	D-1
QR4032	D-1
QR4033	B-2
QR4034	B-2
QR4502	C-3
QR4503	C-3
QR4504	E-1
QR4506	D-1

Integrated Circuit

IC4001	A-1
IC4002	C-1
IC4003	B-1
IC4004	A-3
IC4501	D-2
IC4502	D-3
IC4503	D-3
IC4504	D-4
IC4505	D-2
IC4506	C-3
IC4507	D-3
IC4508	D-3
IC4509	C-3
IC4510	B-3

Adjustment

VR4007	A-1
VR4008	A-1

Test Point

TP4005	C-1
TP4006	B-1
TP4501	C-1
TP4502	C-1
TPG4001	C-1

Connector

P4001	C-1
P4002	A-2
P4003	A-2
P4501	C-3
P4502	C-3

ADDRESS INFORMATION

COMPONENT SIDE

AUDIO 1

Transistor

Q4009	A-1
Q4010	A-1
Q4012	B-1
Q4018	B-1
Q4020	A-2
Q4506	E-3
Q4508	D-1

Transistor & Resistor

QR4022	D-2
QR4023	D-1
QR4501	E-2
QR4505	D-1

Integrated Circuit

IC4002	C-1
IC4003	B-1
IC4006	D-2
IC4504	D-4
IC4506	C-3
IC4510	B-3
IC4511	D-3

Adjustment

VR4001	B-1
VR4002	B-1
VR4003	B-1
VR4004	B-1
VR4005	C-1
VR4006	D-1
VR4007	A-1
VR4008	A-1
VR4501	D-1
VR4502	D-1
VR4503	C-1
VR4504	C-1
VR4505	B-3
VR4506	B-3
VR4507	D-1

Test Point

TP4005	C-1
TP4006	B-1
TP4501	C-1
TP4502	C-1
TPG4001	C-1

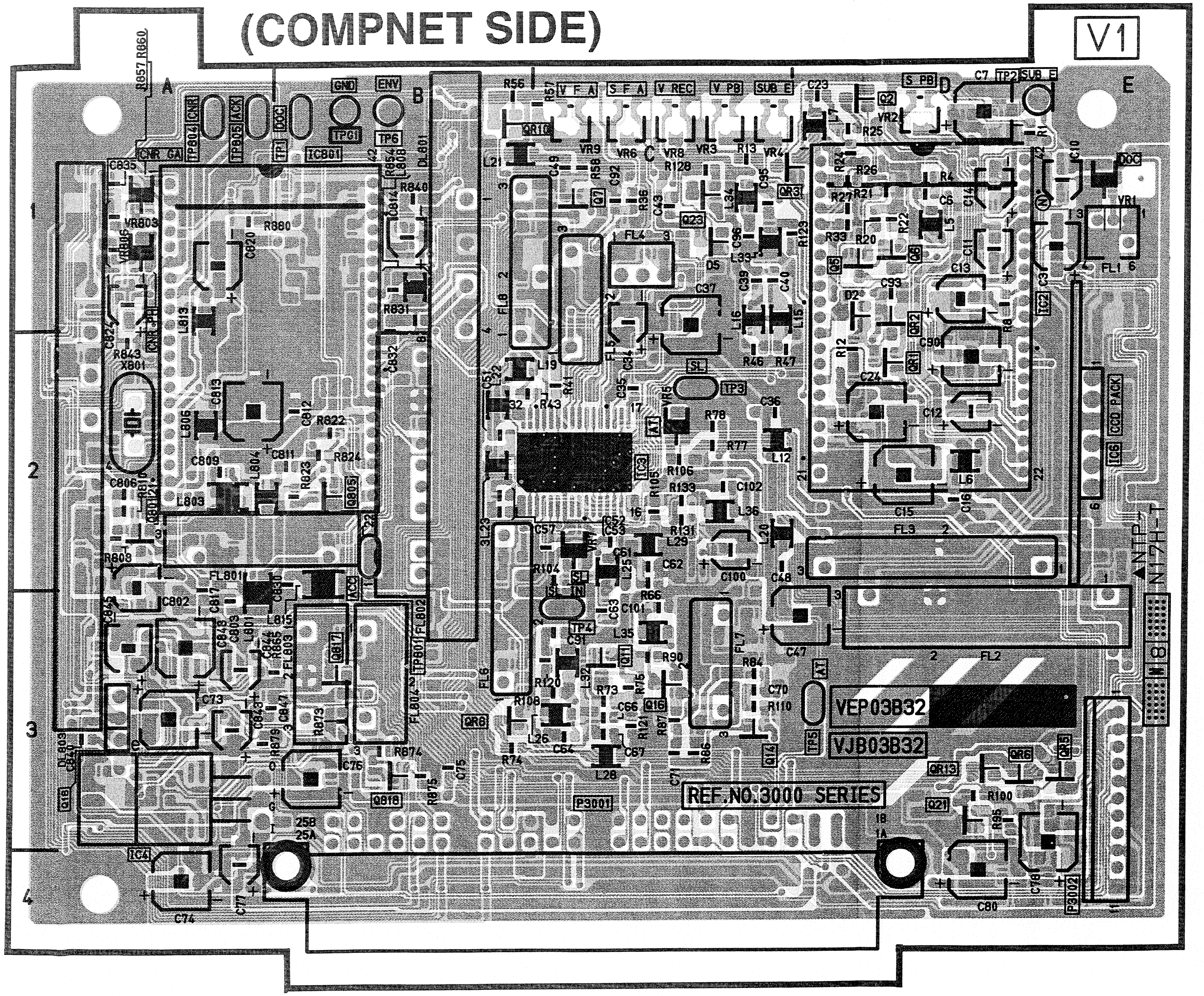
Connector

P4001	C-1
P4002	A-2
P4003	A-3
P4501	C-3
P4502	C-3

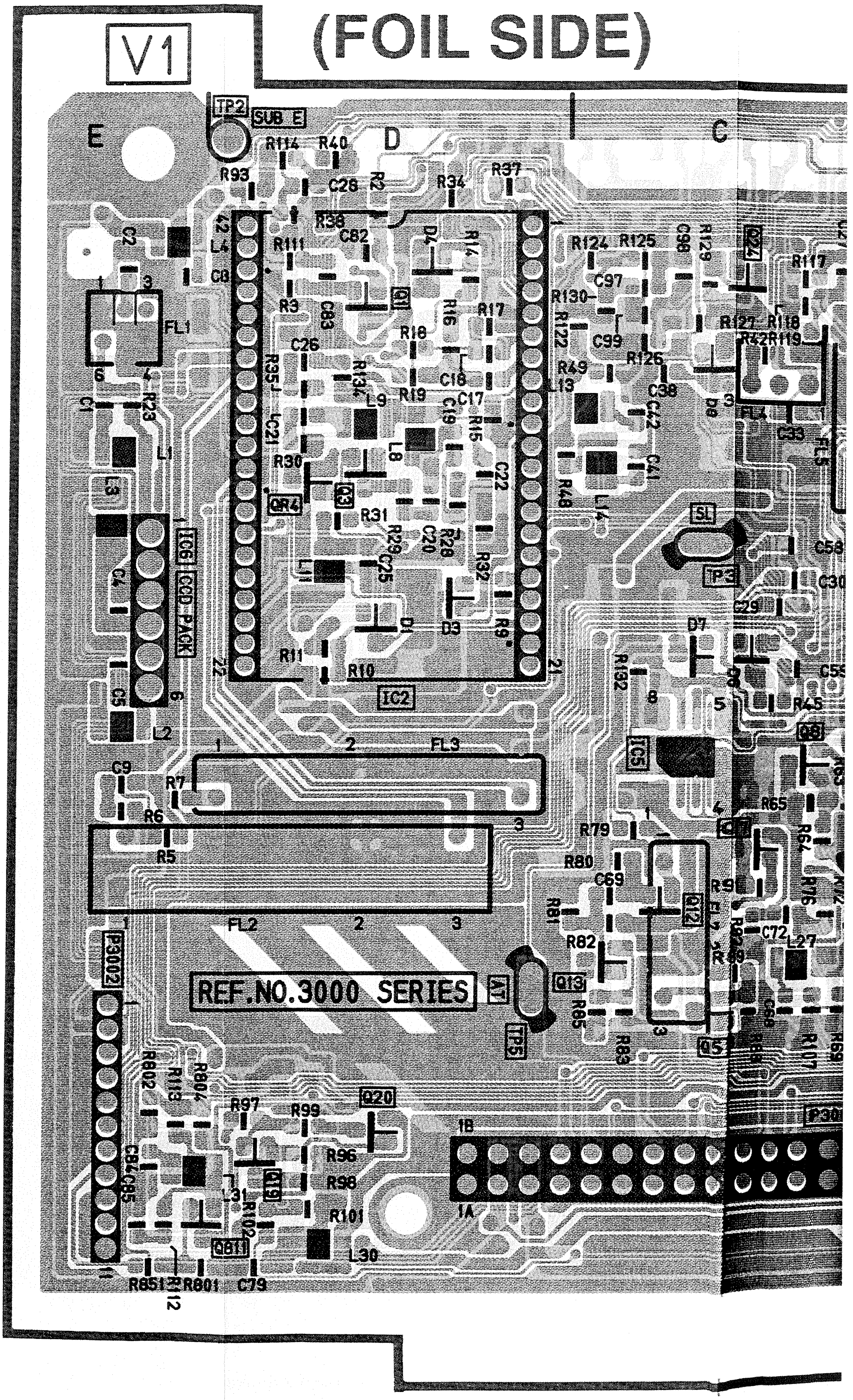
ADDRESS INFORMATION

VIDEO (1) C.B.A. (VEP03B32A)

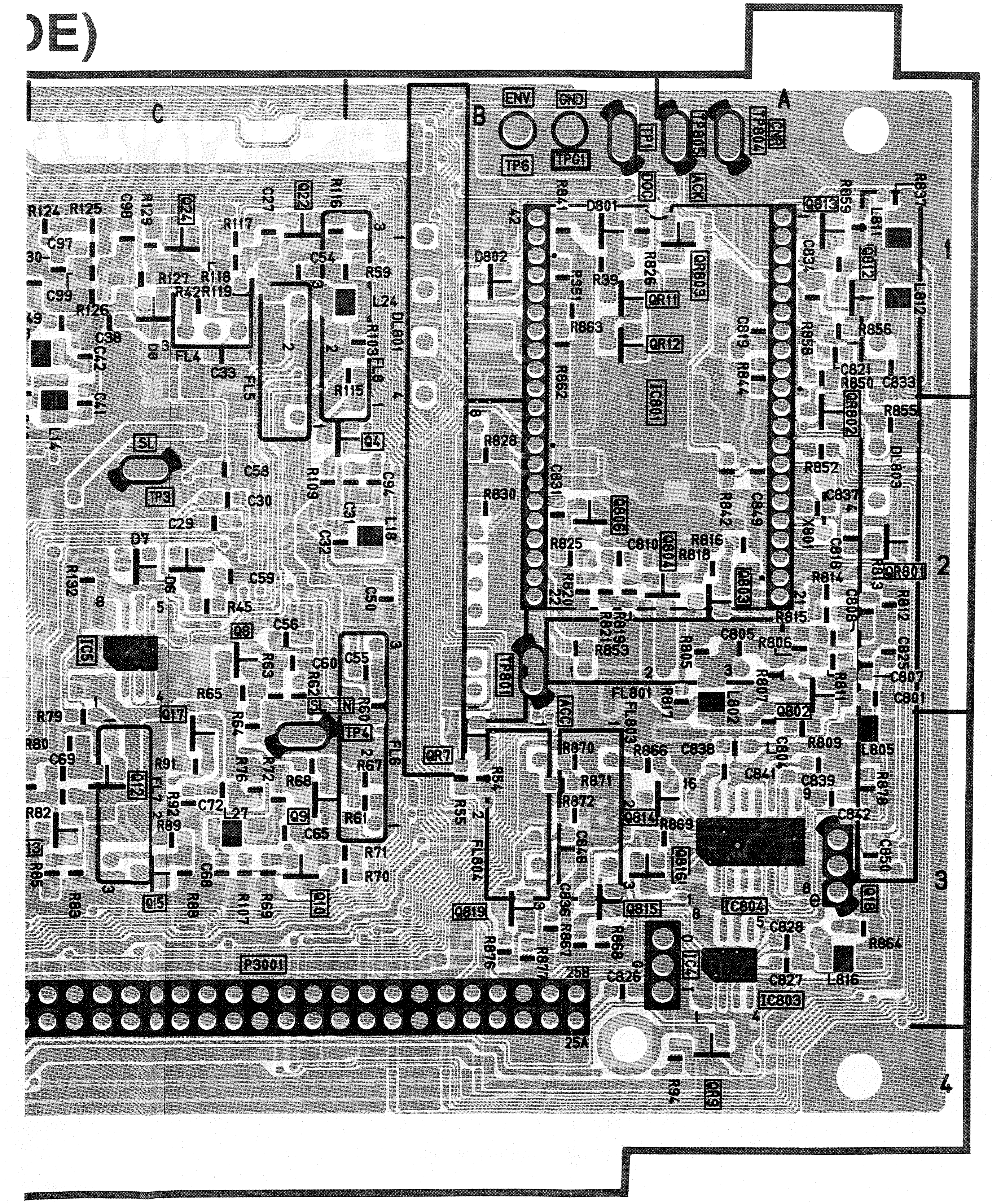
(COMPNET SIDE)


V1
A
B
C
D
E
1
2
3
4
GND
ENV
S PB
TP2
SUB E
V F A
S F A
V REC
V PB
CCD PACK
IC6
IC2
FL2
FL3
FL6
FL7
FL801
VEP03B32
VJB03B32
REF.NO.3000 SERIES
P3001
P3002
ANTP-N17H-1

(FOIL SIDE)


V1
TP2
SUB E
E
D
C
CCD PACK
IC2
FL1
FL2
FL3
P3002
REF.NO.3000 SERIES
1A
1B

DE)


A
B
C
1
2
3
4
ENV
GND
TP6
TPG1
TP1
TP805
TP804
CN8
DOC
ACK
IC801
IC803
IC804
QR801
QR802
QR803
QR811
QR812
QR7
QR9
P3001
25B
25A
42
22
21
X801
FL801
FL803
FL804
L802
L805
L816
R841
R826
R863
R862
R828
R830
R825
R853
R805
R807
R809
R811
R813
R814
R815
R816
R818
R842
R844
R852
R855
R856
R858
R859
R864
R870
R871
R872
R876
R877
D801
D802
C805
C806
C808
C810
C819
C821
C826
C827
C828
C831
C833
C834
C837
C838
C839
C841
C842
C849
C850
C807
C801
C825
TP3
TP4
SL
Q4
Q8
Q9
Q10
Q12
Q15
Q17
Q22
Q24
IC5
FL4
FL5
FL6
FL7
DL801
L18
L24
L27
R45
R59
R61
R65
R67
R68
R71
R70
R79
R91
R107
R109
R115
R116
R117
R124
R125
R126
R127
R129
C27
C29
C30
C33
C38
C50
C54
C55
C56
C58
C59
C60
C65
C68
C69
C72
C94
C97
C98
C99
D6
D7
D8
R54
R55

COMPONENT SIDE

VIDEO 1

Transistor	
Q3801	A-2
Q3018	A-3
Q3805	B-2
Q3817	B-3
Q3818	B-3
Q3008	B-3
Q3007	C-1
Q3023	C-1
Q3011	C-3
Q3016	C-3
Q3014	C-3
Q3021	D-3
Q3005	D-1
Q3006	D-1
Q3002	D-1

Transistor & Resistor	
QR3010	B-1
QR3003	C-1
QR3002	D-1
QR3001	D-2
QR3013	D-3
QR3006	D-3
QR3005	E-3

Integrated Circuit	
IC3004	A-4
IC3801	B-1
IC3002	D-1
IC3006	E-2
IC3003	C-2

Test Point	
TP3804	A-1
TP3805	A-1
TP3001	B-1
TPG3001	B-1
TP3006	B-1
TP3801	B-3
TP3004	C-3
TP3003	C-2
TP3005	D-3
TP3002	D-1

Adjustment	
VR3002	D-1
VR3003	C-1
VR3005	C-2
VR3007	C-2
VR3001	E-1
VR3009	C-1
VR3006	C-1
VR3008	C-1
VR3004	C-1

Conector	
P3002	E-4
P3001	E-3

ADDRESS INFORMATION

FOIL SIDE

VIDEO 1

Transistor	
Q3001	D-1
Q3003	D-2
Q3020	D-3
Q3019	D-3
Q3811	D-4
Q3024	C-1
Q3022	C-1
Q3008	C-2
Q3017	C-3
Q3012	C-3
Q3013	C-3
Q3015	C-3
Q3009	C-3
Q3010	C-3
Q3004	B-2
Q3806	B-2
Q3804	A-2
Q3813	A-1
Q3803	A-2
Q3802	A-2
Q3007	B-3
Q3819	B-3
Q3814	B-3
Q3815	B-3
Q3811	D-4
Q3816	A-3
Q3018	A-3
Q3812	A-1

Transistor & esistor	
QR3011	B-1
QR3012	B-1
QR3803	A-1
QR3802	A-2
QR3801	A-2
QR3809	A-4
QR3004	D-2

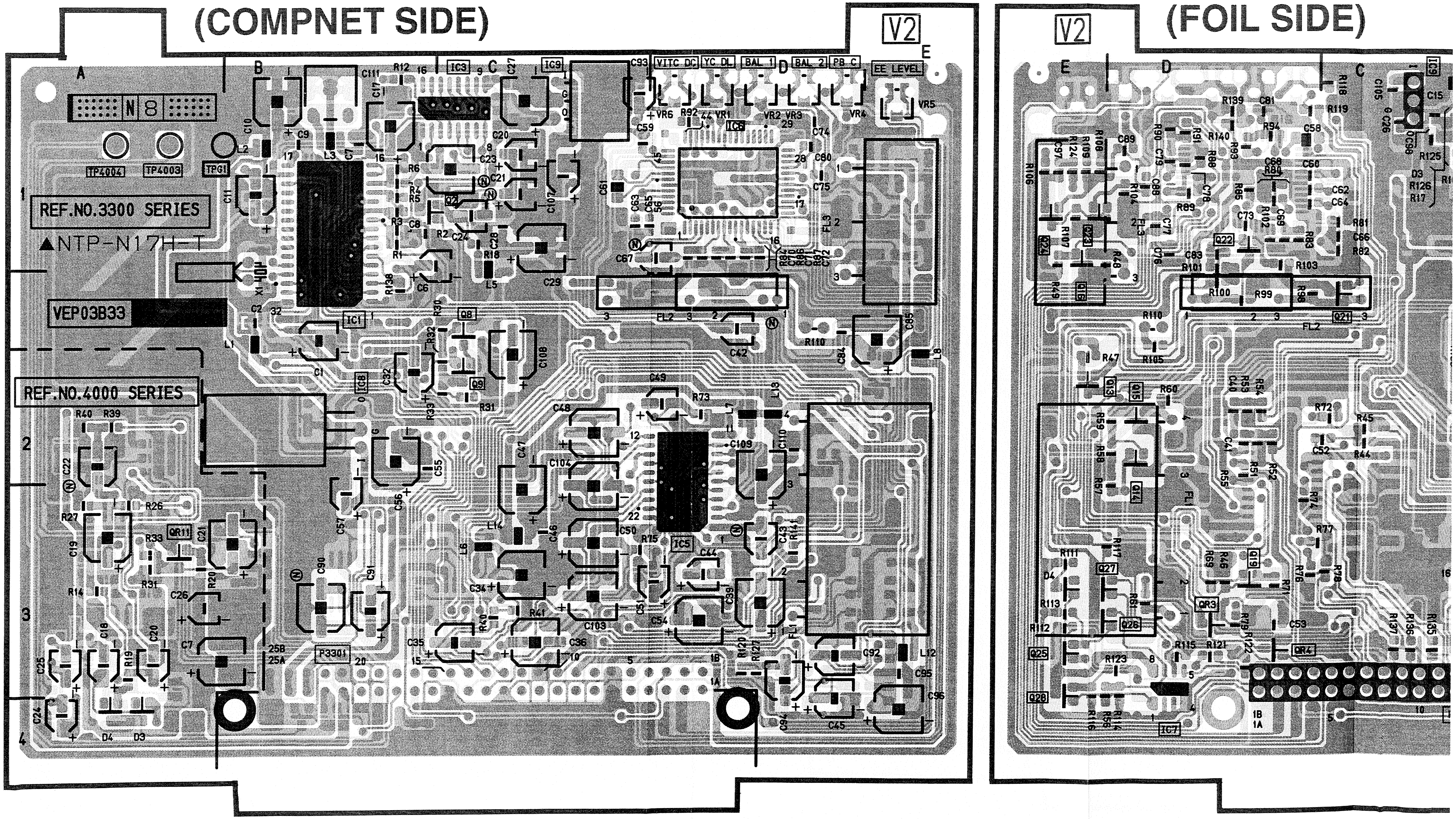
Integrated Circuit	
IC3006	E-2
IC3002	D-2
IC3005	C-2
IC3804	A-3
IC3803	A-3
IC3801	A-2
IC3004	A-3

Test Point	
TP3005	D-3
TP3003	C-2
TPG3000	B-1
TPG3001	B-1
TP3001	B-1
TP3805	A-1
TP3804	A-1
TP3801	B-2
TP3004	B-3
TP3002	D-1

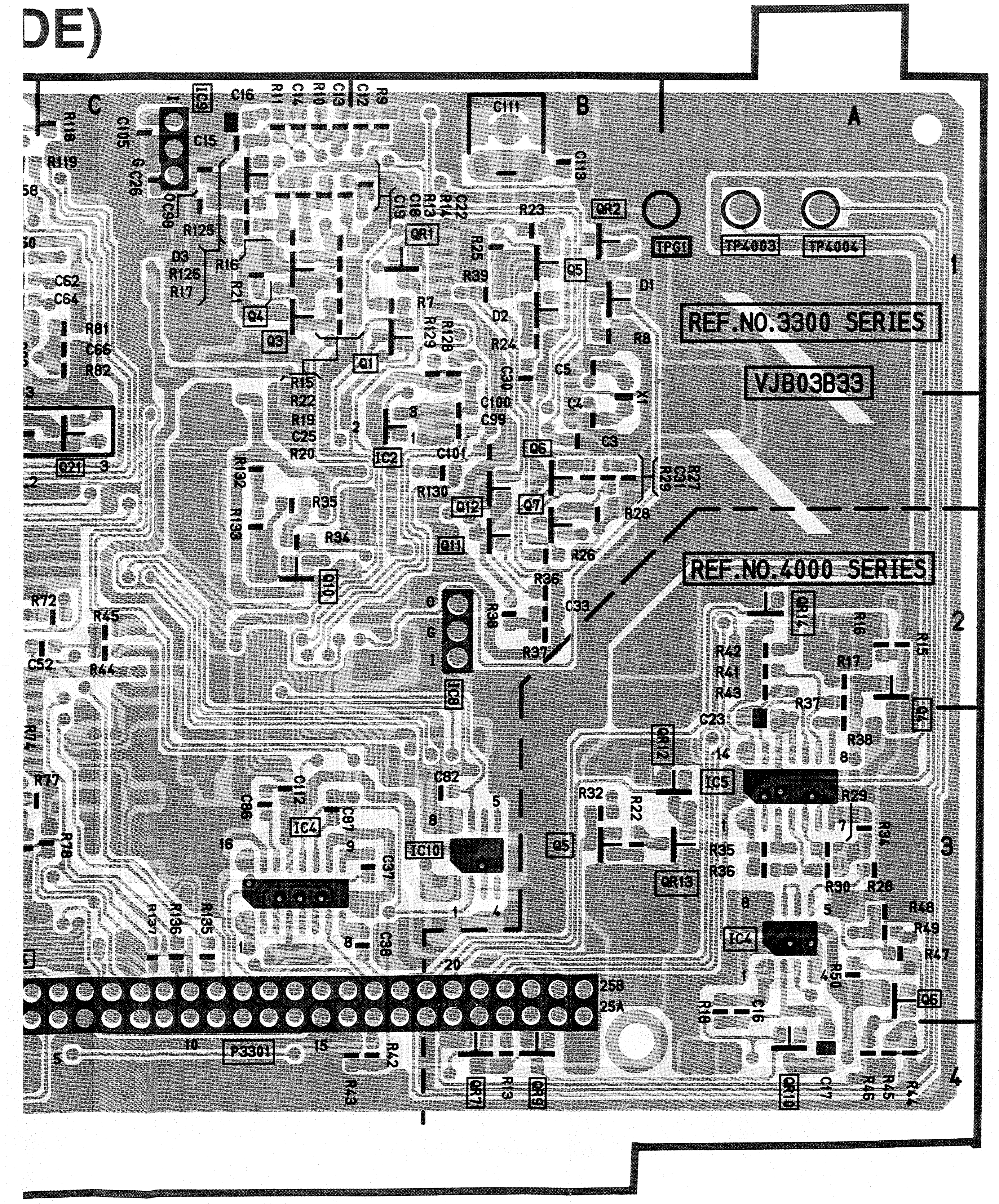
Connector	
P3001	C-3
P3002	E-3

ADDRES INFORMATION

VIDEO (2) C.B.A. (VEP03B33A)


(COMPNET SIDE)
(FOIL SIDE)
V2
A
B
C
D
E
1
2
3
4
REF.NO.3300 SERIES
▲NTP-N17H-T
VEP03B33
REF.NO.4000 SERIES
TP4004
TP4003
TPG1
IC1
IC3
IC5
IC6
IC7
IC9
FL1
FL2
FL3
VITC DC
YC DL
BAL 1
BAL 2
PB C
EE LEVEL
VR1
VR2
VR3
VR4
VR5
VR6
P3301
QR11
X1
25B
25A
1B
1A

DE)


C
B
A
1
2
3
4
REF.NO.3300 SERIES
VJB03B33
REF.NO.4000 SERIES
TPG1
TP4003
TP4004
C111
QR1
QR2
Q1
Q3
Q4
Q5
Q6
Q7
Q10
Q11
Q12
Q21
IC2
IC4
IC5
IC8
IC9
IC10
QR7
QR9
QR10
QR12
QR13
QR14
P3301
25B
25A
20
15
10
5

COMPORNENT SIDE

VIDEO 2	
Transistor	
Q3308	C-2
Q3309	C-2
Q3302	C-1
Transistor & Resistor	
QR4011	A-3
Integrated Circuit	
IC3301	B-2
IC3303	C-1
IC3309	C-1
IC3308	B-2
IC3305	D-3
IC3306	D-1
Test Point	
TP4004	A-1
TP4003	A-1
TPG3301	A-1
Adjustment	
VR3306	D-1
VR3301	D-1
VR3302	D-1
VR3303	D-1
VR3304	D-1
VR3305	E-1
C3411	B-1
Connector	
P3301	B-3

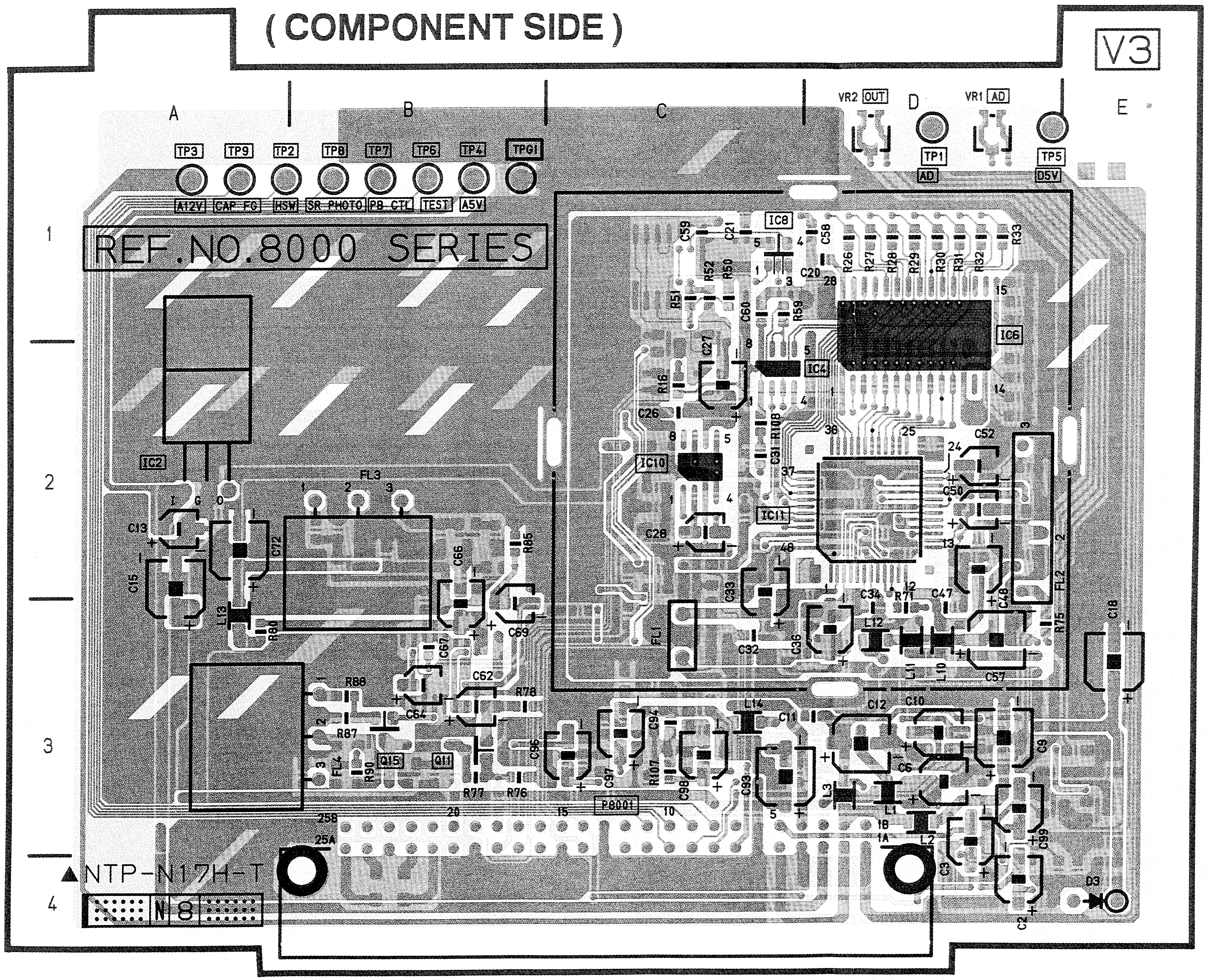
ADDRESS INFORMATION

FOIL SIDE

VIDEO 2			
Transistor		QR3304	D-3
		QR3301	B-1
Q3324	E-1	QR3302	B-1
Q3323	E-1	QR4007	B-4
Q3316	E-2	QR4009	B-4
Q3322	D-1	QR4013	A-3
Q3313	D-2	QR4010	A-4
Q3315	D-2	QR4012	A-3
Q3314	D-3	QR4014	A-2
Q3327	D-3		
Q3326	D-3	**Integrated Circuit**	
Q3325	E-3		
Q3328	E-3	IC3307	D-4
Q3319	D-3	IC3309	C-1
Q3321	C-2	IC3304	C-3
Q3304	C-1	IC3310	B-3
Q3303	C-1	IC3308	B-2
Q3301	B-1	IC3302	B-2
Q3310	C-2	IC4005	A-3
Q4005	B-3	IC4004	A-3
Q3311	B-2		
Q3312	B-2	**Test Point**	
Q3307	B-2	TP4003	A-1
Q3306	B-2	TP4004	A-1
Q3305	B-1	TPG3301	A-1
Q4006	A-3		
Q4004	A-2	**Connector**	
Transistor & Resistor		P3301	C-4
QR3303	D-3		

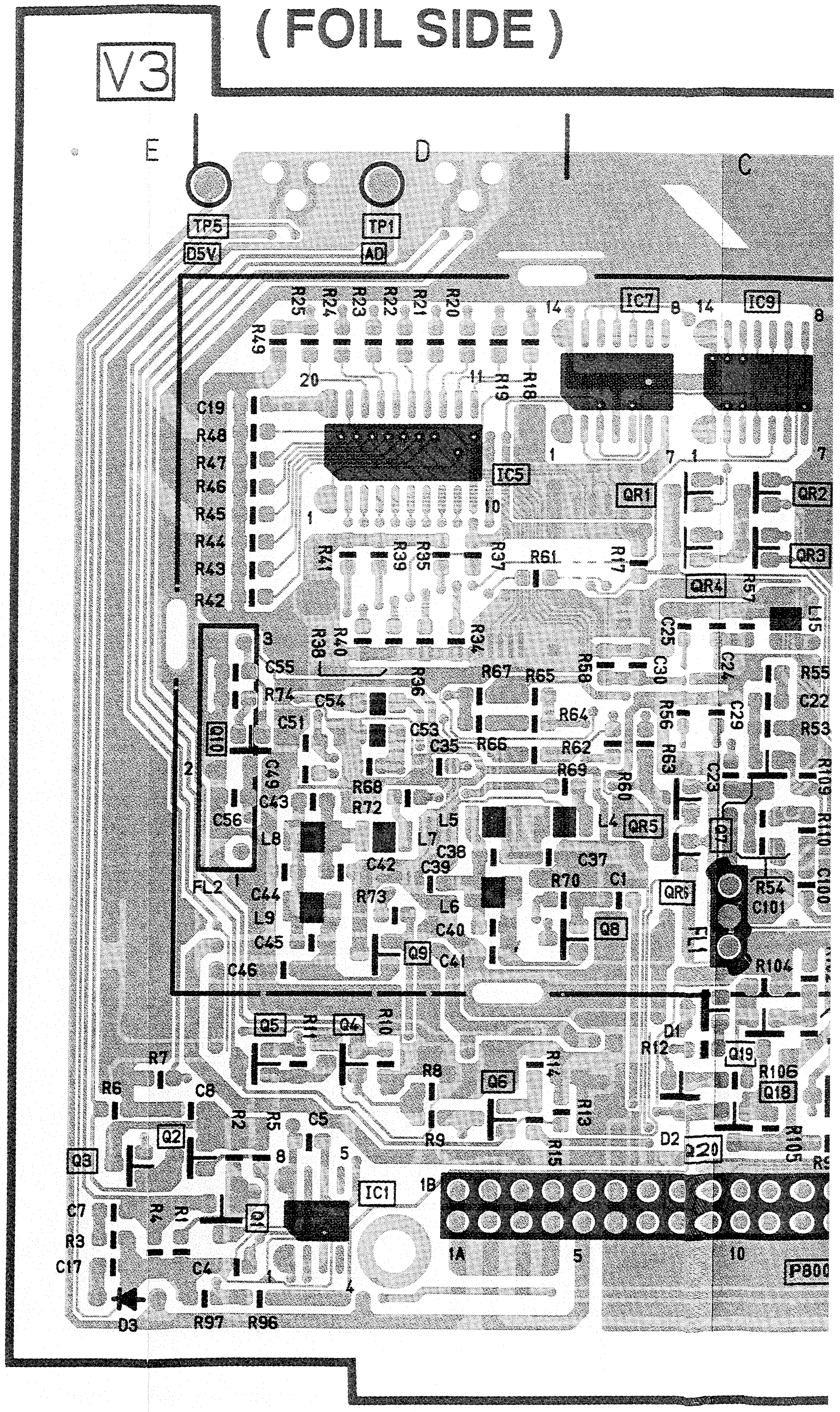
ADDRES INFORMATION

VIDEO (3) C.B.A. (VEP08164B)



(COMPONENT SIDE)

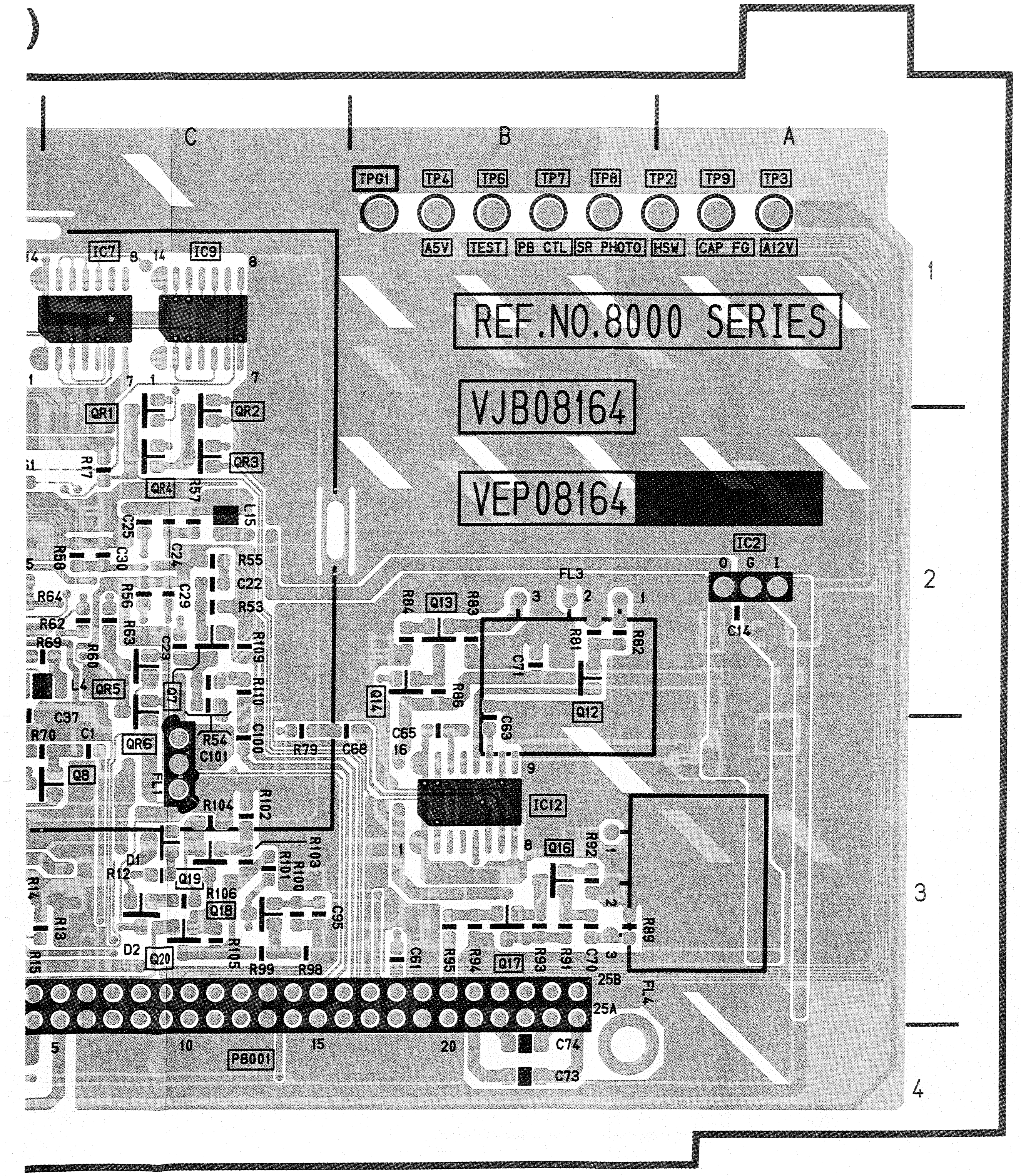
V3
A
B
C
D
E
1
2
3
4
TP3
TP9
TP2
TP8
TP7
TP6
TP4
TPG1
A12V
CAP FG
HSW
SR PHOTO
PB CTL
TEST
A5V
VR2 OUT
VR1 AD
TP1
AD
TP5
D5V
REF.NO.8000 SERIES
IC2
FL3
IC8
IC6
IC4
IC10
IC11
FL1
FL2
FL4
Q15
Q11
P8001
25B
25A
20
15
10
5
1B
1A
D3
NTP-N17H-T
N8



(FOIL SIDE)

V3
E
D
C
TP5
D5V
TP1
AD
IC7
IC9
IC5
QR1
QR2
QR3
QR4
QR5
Q10
Q8
Q9
Q5
Q4
Q6
Q2
Q3
Q1
IC1
Q19
Q18
Q20
FL1
FL2
P800
1B
1A
5
10
D3

)


C
B
A
1
2
3
4
TPG1
TP4
TP6
TP7
TP8
TP2
TP9
TP3
A5V
TEST
PB CTL
SR PHOTO
HSW
CAP FG
A12V
IC7
IC9
REF.NO.8000 SERIES
VJB08164
VEP08164
QR1
QR2
QR3
QR4
QR5
QR6
IC2
IC12
FL3
FL1
FL4
Q7
Q8
Q12
Q13
Q14
Q16
Q17
Q18
Q19
Q20
P8001
C14
C74
C73
25B
25A
5
10
15
20

COMPONENT SIDE

VIDEO 3	
Transistor	
Q8011	B-3
Q8015	B-3
Integrated Circuit	
IC8002	A-2
IC8004	C-2
IC8006	D-1
IC8008	C-1
IC8010	C-2
IC8011	C-2
Test Point	
TP8001	D-1
TP8002	A-1
TP8003	A-1
TP8004	B-1
TP8005	D-1
TP8006	B-1
TP8007	B-1
TP8008	B-1
TP8009	A-1
TPG8001	B-1
Adjustment	
VR8001	D-1
VR8002	D-1
Connector	
P8001	C-1

ADDRESS INFORMATION

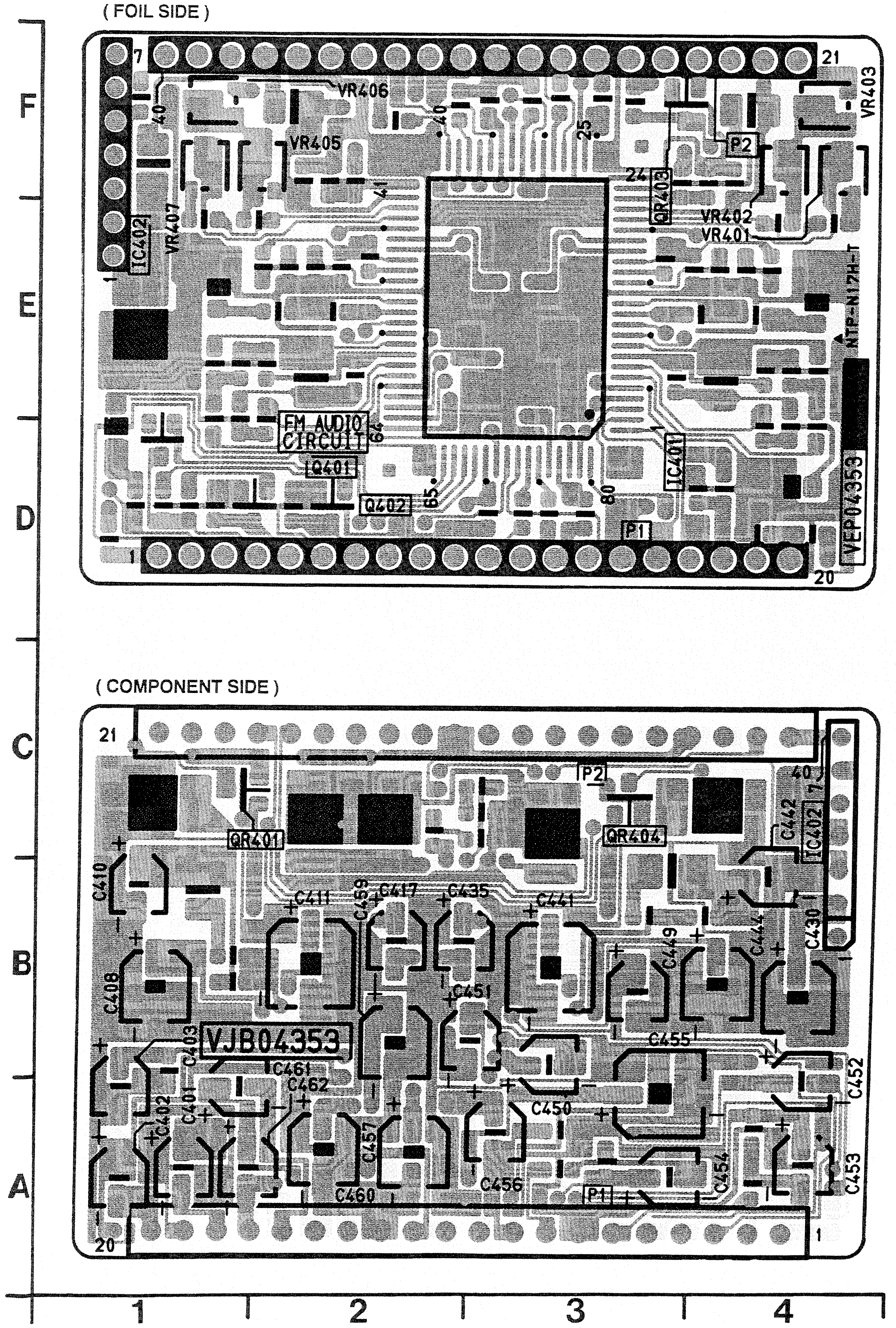
FOIL SIDE

VIDEO 3			
Transistor		Test Point	
Q8001	D-4	TP8001	D-1
Q8002	E-3	TP8002	A-1
Q8003	E-3	TP8003	A-1
Q8004	D-4	TP8004	B-1
Q8005	D-3	TP8005	D-1
Q8006	D-4	TP8006	B-1
Q8007	C-2	TP8007	B-1
Q8008	C-3	TP8008	B-1
Q8009	D-4	TP8009	A-1
Q8010	D-2	TPG8001	B-1
Q8012	B-2	Connector	
Q8013	B-2		
Q8014	B-2	P8001	C-4
Q8016	B-3		
Q8017	B-3		
Q8018	C-3		
Q8019	C-3		
Q8020	C-3		
Transistor & Resistor			
QR8001	C-2		
QR8002	C-2		
QR8003	C-2		
QR8004	C-2		
QR8005	C-2		
QR8006	C-3		
Integrated Circuit			
IC8001	D-4		
IC8002	A-2		
IC8005	D-1		
IC8007	C-1		
IC8009	C-1		
IC8012	B-3		

ADDRESS INFORMATION

FM AUDIO PACK C.B.A. (VEP04353B)

HEAD AMP C.B.A. (VEP05162I)


(FOIL SIDE)
(COMPONENT SIDE)
F
E
D
C
B
A
1
2
3
4
VR406
VR405
VR407
VR403
VR402
VR401
IC402
IC401
QR403
P2
P1
FM AUDIO CIRCUIT
Q401
Q402
NTP-N17H-T
VEP04353
QR401
QR404
VJB04353
C410
C411
C459
C417
C435
C441
C442
C444
C449
C430
C408
C451
C455
C403
C461
C462
C402
C401
C450
C457
C456
C460
C454
C452
C453
21
20
40
7
1

FOIL SIDE

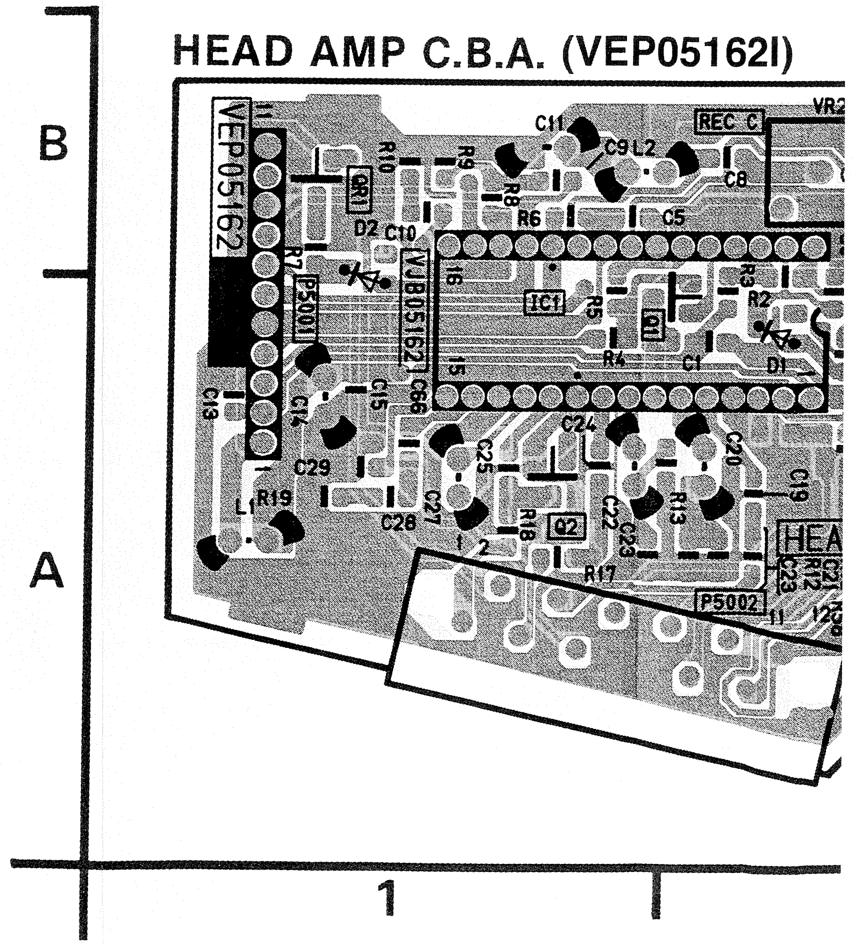
FM AUDIO	
Transistor	
Q401 Q402	D-2 D-2
Transistor & Resistor	
QR403	F-3
Integrated Circuit	
IC402	E-1
Adjustment	
VR401 VR402 VR403 VR405 VR406 VR407	E-4 E-4 F-4 F-2 F-2 E-1

ADDRESS INFORMATION

COMPONENT SIDE

FM AUDIO	
Transistor & Resistor	
QR401 QR404	C-2 C-3
Integrated Circuit	
IC402	C-4

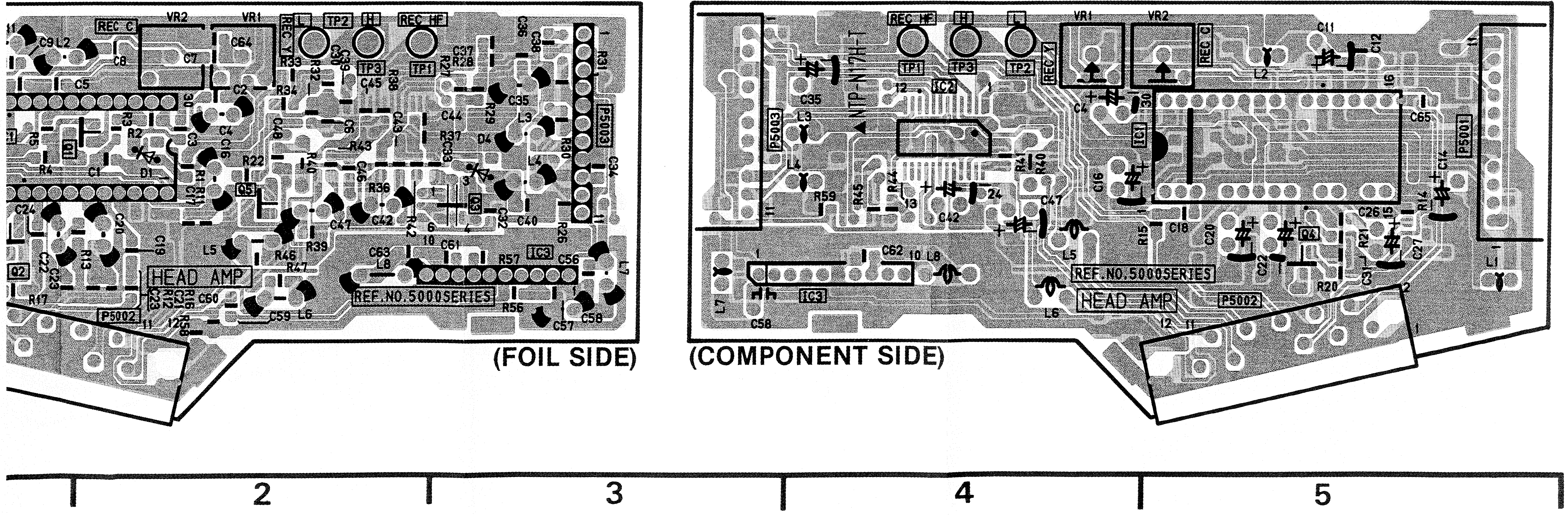
ADDRESS INFORMATION


HEAD AMP C.B.A. (VEP05162I)

B
A
1
VEP05162
VJB05162
IC1
Q1
Q2
QR1
D1
D2
L1
L2
P5001
P5002
REC C
C1
C5
C8
C9
C10
C11
C13
C14
C15
C19
C20
C22
C23
C24
C25
C27
C28
C29
C66
R2
R3
R4
R5
R6
R7
R8
R9
R10
R12
R13
R17
R18
R19
HEA

62I)

(VEP05162I)


REC C
VR2
VR1
REC Y
TP2
TP3
TP1
REC HF
P5003
P5002
P5001
HEAD AMP
REF.NO.5000SERIES
NTP-N17H-T
IC1
IC2
IC3
2
3
4
5

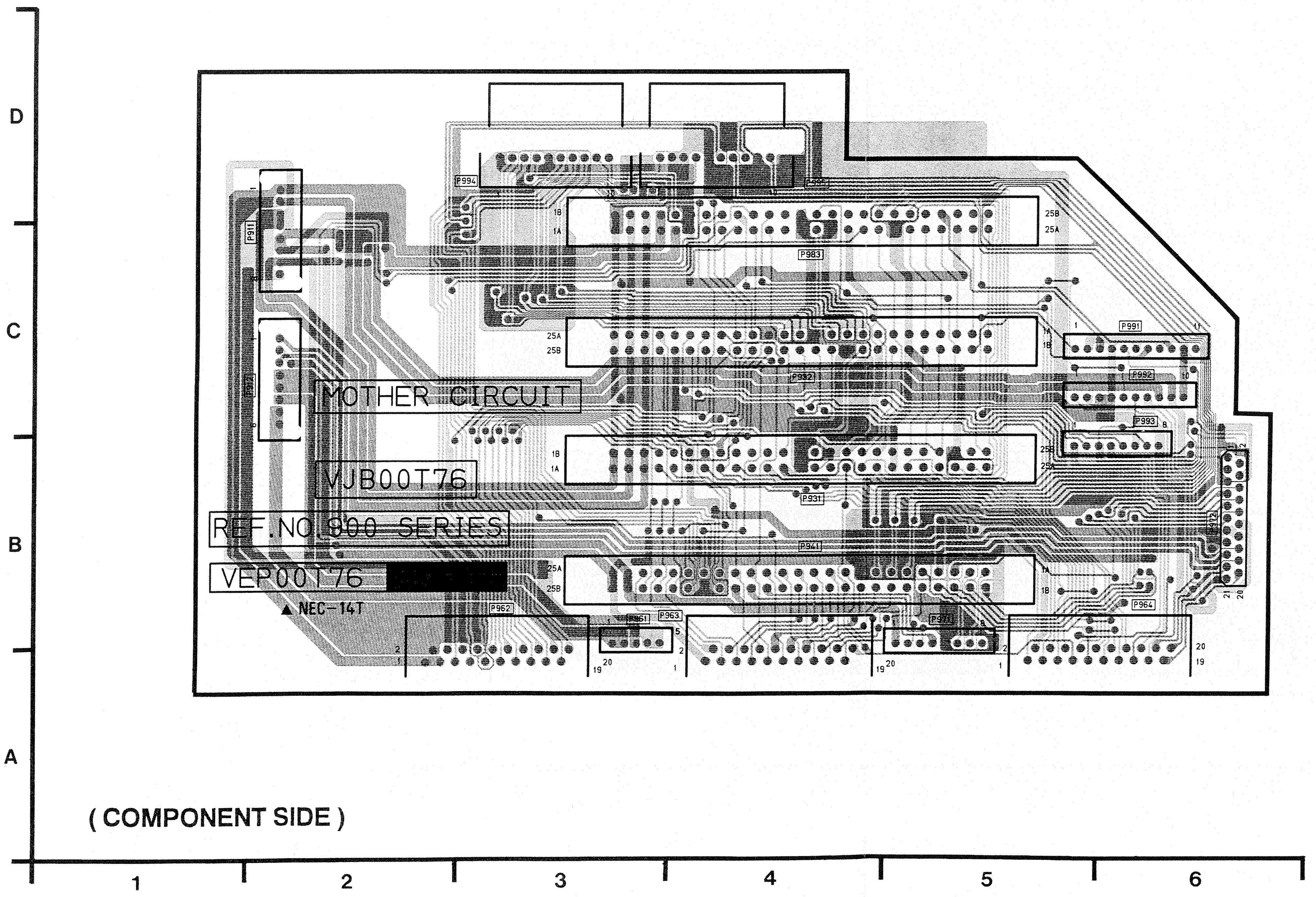
(FOIL SIDE)

(COMPONENT SIDE)

HEAD AMP C.B.A.	
Transistor	
Q5001	A-1 Ⓕ
Q5002	A-1 Ⓕ
Q5003	A-3 Ⓕ
Q5004	A-5 Ⓒ
Q5005	A-2 Ⓕ
Transistor & Resistor	
QR5001	B-1 Ⓕ
Integrated Circuit	
IC5001	A-1 Ⓕ
IC5001	A-4 Ⓒ
IC5002	B-4 Ⓒ
IC5003	A-3 Ⓕ
IC5003	A-4 Ⓒ
Adjustment	
VR5001	B-2 Ⓕ
VR5001	B-4 Ⓒ
VR5002	B-2 Ⓕ
VR5002	B-4 Ⓒ
Test Point	
TP5001	B-2 Ⓕ
TP5001	B-4 Ⓒ
TP5002	B-2 Ⓕ
TP5002	B-4 Ⓒ
TP5003	B-2 Ⓕ
TP5003	B-4 Ⓒ
Connector	
P5001	A-1 Ⓕ
P5001	A-5 Ⓒ
P5002	A-2 Ⓕ
P5002	A-5 Ⓒ
P5003	A-3 Ⓕ
P5003	A-3 Ⓒ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

MOTHER C.B.A. (VEP00T76A)

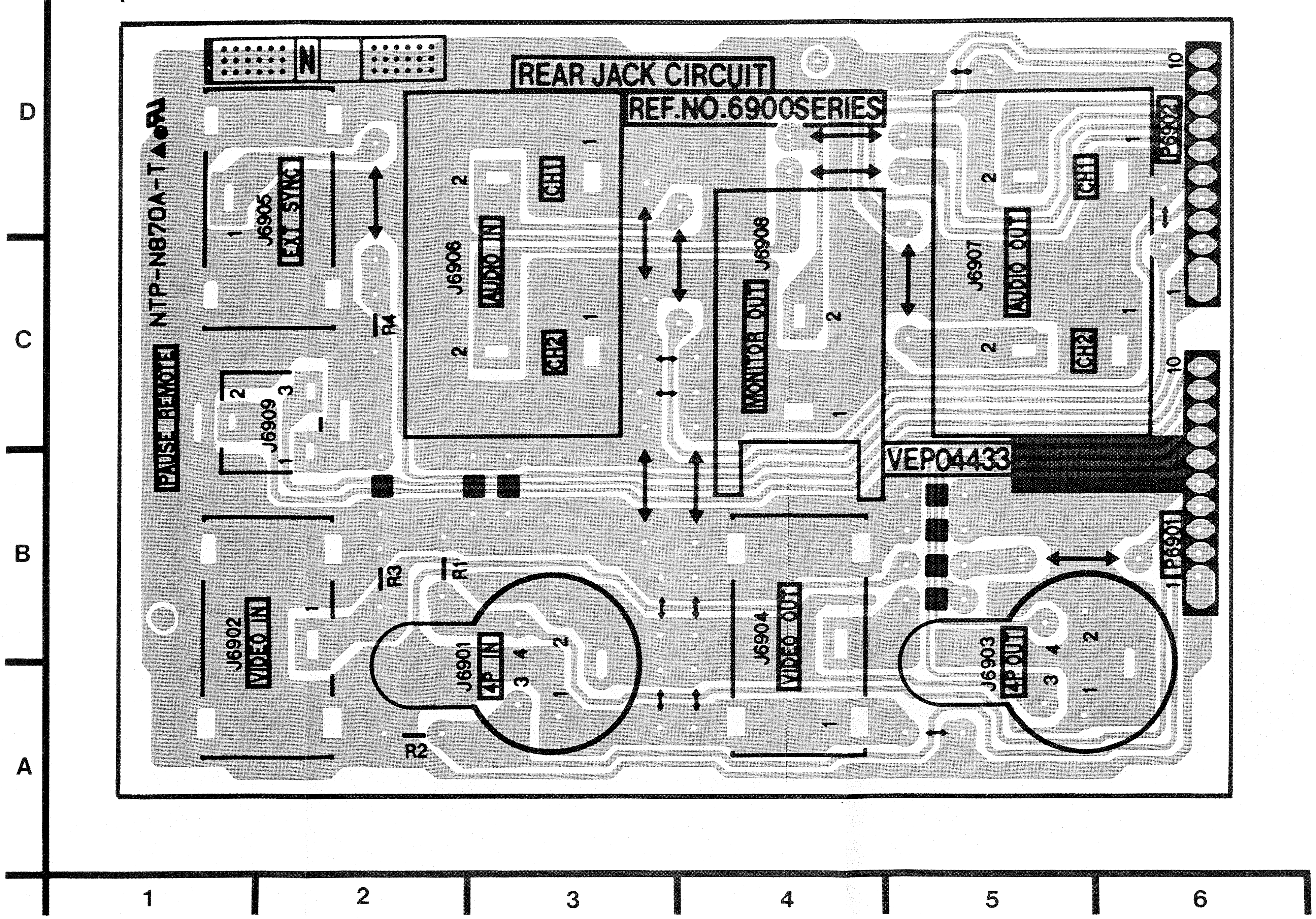

D
C
B
A
1
2
3
4
5
6
MOTHER CIRCUIT
VJB00T76
REF.NO.800 SERIES
VEP00T76
▲NEC-14T
P911
P912
P931
P932
P941
P961
P962
P963
P964
P971
P972
P983
P991
P992
P993
P994
P995
1A
1B
25A
25B
(COMPONENT SIDE)

MOTHER	
Connector	
P911	C-2
P912	C-2
P931	B-4
P932	C-4
P941	B-4
P961	B-3
P962	B-3
P963	B-4
P964	B-6
P971	B-5
P972	B-6
P983	C-4
P991	C-6
P992	C-6
P993	C-6
P994	D-3
P995	D-4

ADDRESS INFORMATION

REAR JACK C.B.A. (VEP04433A)

(COMPONENT SIDE)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REAR JACK CIRCUIT
REF.NO.6900SERIES
NTP-N870A-T
J6905
EXT SYNC
J6906
AUDIO IN
CH1
CH2
J6908
MONITOR OUT
J6907
AUDIO OUT
P6902
P6901
VEP04433
PAUSE REMOTE
J6909
J6902
VIDEO IN
J6901
4P IN
J6904
VIDEO OUT
J6903
4P OUT
R1
R2
R3
R4
10
1
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3
4

SECTION 8

EXPLODED VIEWS & REPLACEMENT PARTS LISTS

CONTENTS

SERVING FIXTURES & TOOLS LIST PRT-2
CHASSIS PARTS SECTION PRT-3
MOVING PARTS SECTION PRT-5
CASSETTE COMPARTMENT SECTION PRT-7
CHASSIS & FRAME SECTION PRT-8
PACKING PARTS SECTION PRT-10
ELECTRICAL REPLACEMENT PARTS LIST PRT-11

NOTES

1. • Be sure to make your orders of replacement parts according to this list.
   • "<R>" in Remark column indicates recommended parts.
   • "<M>" in Remark column indicates needed in the periodical maintenance.
2. IMPORTANT SAFETY NOTICE
   Components identified by "<!>" have special characteristics important for safety.
   When replacing any of these components, use only the original ones.
   Meaning of symbol "<!>" on this parts list is exactly the same as symbol ⚠on Schematic and Circuit Board Diagrams.
3. Unless otherwise specified ;
   All resistors are in (Ω), K=1,000Ω, M=1,000kΩ.
   All capacitors are in (F), U=10^{-6} F, P=10^{-12} F.
4. ITEM NUMBERS WITH CAPITAL LETER E
   Item numbers with capital leter E (Example:E1, E2,...) in Ref.No. column mean that the parts are listed with the E item numbers in the exploded views.
5. The main assembled parts are shown below C.B.A. marked with "■" .
6. When ordering parts, use parts No. only fôrm Part No. column.
7. Printed circuit board assembly with mark.(RTL) is no longer available after discontinuation of the product.
8. Abbreviations for parts ;

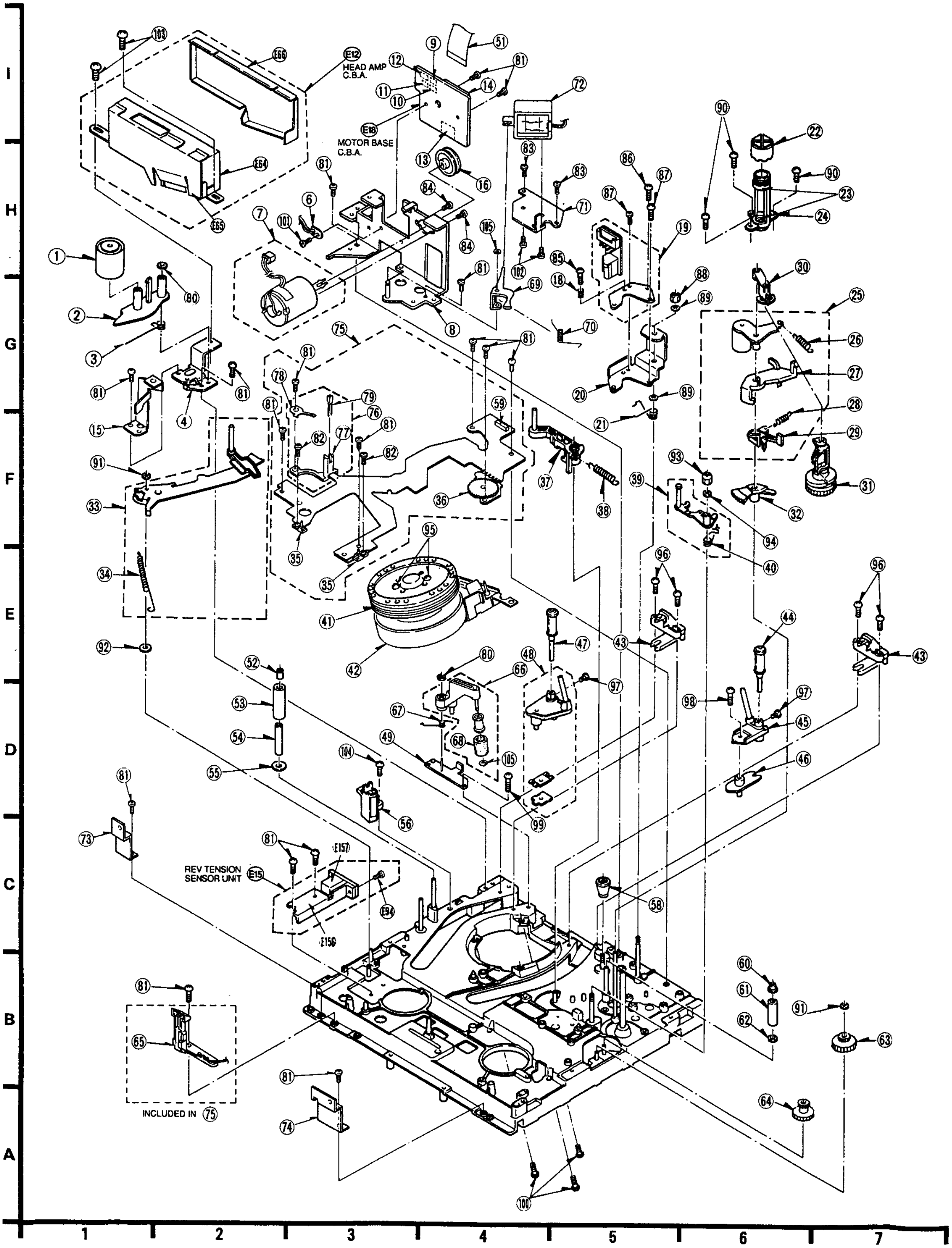
-- NAME --	-- DESCRIPTION --
C.CAPACITOR	CERAMIC CAPACITOR
C.CAPACITOR CH	CERAMIC CHIP CAPACITOR
E.CAPACITOR	ELECTROLYTIC CAPACITOR
G.CAPACITOR	GLASS CAPACITOR
M.CAPACITOR	MICA CAPACITOR
P.CAPACITOR	PLASTIC FILM CAPACITOR
S.CAPACITOR	SEMI-CONDUCTOR CAPACITOR
T.CAPACITOR	TANTALUM CAPACITOR
TRIMMER	TRIMMER
C.RESISTOR	CARBON RESISTOR
F.RESISTOR	FUSE RESISTOR
M.RESISTOR	METAL OXSIDE RESISTOR
M.RESISTOR CH	METAL OXSIDE CHIP RESISTOR
S.RESISTOR	SOLID RESISTOR
V.RESISTOR	VARIABLE RESISTOR
W.RESISTOR	WIRE WOUND RESISTOR
COMBI. TR-R	TRANSITOR-RESISTOR COMBINATION PARTS
COMBI. R-R	RESISTOR-RESISTOR COMBINATION PARTS
COMBI. C-R-L	CAPACITOR-COIL COMBINATION PARTS
C.B.A.	CIRCUIT BOARD ASSEMBLY

SERVICING FIXTURES & TOOLS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFM8180HADH	VHS ALIGNMENT TAPE	1	
		VFK0329	POST ADJ. SCREWDRIVER	1	
		VFK0132	BACK TENSION METER	1	(T2-H7-UM)
			(TENTELOMETER, MADE IN		
			U.S.A.)		
		VFK0191	POST ADJ. PLATE	1	
		VFK0133	DIAL TORQUEN GAUGE	1	
		VFK0180	PLASTIC CLAMPER ONLY	1	
		VFK0134	ADAPTOR FOR VFK0133	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0236	TENSION POST ADJ. FIXTURE	1	
		VFK0806	TENSION SENSOR ADJ. FIXTURE	1	
		VFK0328	H-POSITION ADJ. SCREWDRIVER	1	
		VFK0330	FINE ADJ. SCREWDRIVER	1	
			(3mm PHI)		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0326	HEX. WRENCH SET	1	
		VFK0948	CHECK LIGHT	1	
		MOR265	MOLYTONE GREASE	1	
		VFK0680	S.C.R. GREASE	1	
		VFK27	HEAD CLEANING STICK	1	
		VFK0344	POST HEIGHT ADJ. FIXTURE	1	
		VFK0269	L TYPE SCREWDRIVER	1	
		VFK66	FAN TYPE TENSION GAUGE	1	
		VFK0945	EXTENDER BOARD 50P	1	
		VFK0828	EXTENDER CODE 8P		
		VFK0131	HIGH QUALITY OIL	1	

EXPLODED VIEWS ① Chassis Parts Section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E64
E65
E12
HEAD AMP
C.B.A.
E18
MOTOR BASE
C.B.A.
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E157
REV TENSION
SENSOR UNIT
E15
E94
E156
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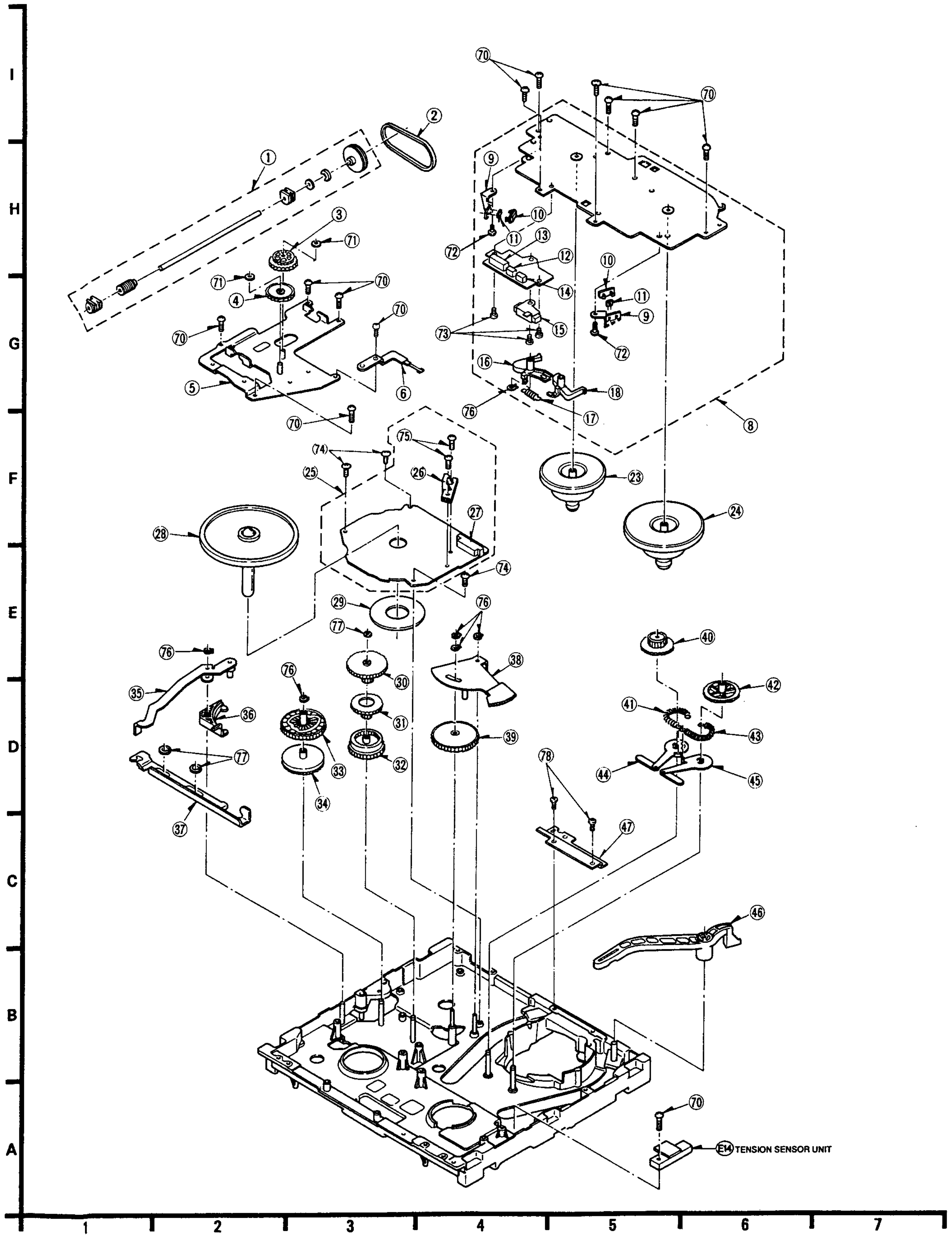
Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1-1		VXP1075	IMPEDANCE ROLLER UNIT	1	
1-2		VML2293	IMPEDANCE ROLLER ARM	1	
1-3		VMB1976	IMPEDANCE SPRING	1	
1-4		VMA7982	HEAD AMP ANGLE (L)	1	
1-6		VEK3185	HUMIDITY RESISTOR UNIT	1	<R>
1-7		VEM0360	LOADING MOTOR UNIT	1	<M><R><!>
1-8		VXA5151	MOTOR BASE (1) UNIT	1	
1-9		VJP1229G	CONNECTOR (2P)	1	
1-10		VJP1229T	CONNECTOR (2P)	1	
1-11		VJP1229R	CONNECTOR (2P)	1	
1-12		VJP1230R	CONNECTOR (3P)	1	
1-13		VJP3106B013	CONNECTOR (13P)	1	
1-14		VJS1493	CONNECTOR (15P)	1	
1-15		VMA8130	IMPEDANCE ROLLER SUPPORT ANGLE	1	
1-16		VDP1319	MOTOR PULLEY	1	
1-18		VMB1251	ADJUST SPRING	1	
1-19		VED0104	A/C HEAD (1) UNIT	1	<M><R>
1-20		VXA3649	A/C HEAD BASE UNIT	1	
1-21		VMB1567	A/C HEIGHT SPRING	1	
1-22		VXQ0006	THRUST SCREW UNIT	1	
1-23		VMX1033	OIL SEAL	2	
1-24		VXD0101	HOUSING UNIT	1	
1-25		VXL2367	PRESSURE ROLLER UNIT	1	<M><R>
1-26		VMB1977	PINCH PRESSURE SPRING	1	
1-27		VXL2368	PINCH PRESSURE ARM	1	
1-28		VMB1569	PINCH ARM SPRING	1	
1-29		VML1874	PINCH LIFT ARM	1	
1-30		VMX1353	PINCH CAM ARM	1	
1-31		VDG0577	PINCH CAM	1	
1-32		VDG0651	PINCH SECTOR GEAR	1	
1-33		VXL2089	TENSION ARM UNIT	1	
1-34		VMB1975	TENSION SPRING	1	
1-35		VSP0293	CASSETTE DETECT SW	2	
1-36		VSS0257	MODE SWITCH	1	<M><R>
1-37		VXL1857	SUB LOADING ARM (1) UNIT	1	
1-38		VMB1566	SUB POST SPRING	1	
1-39		VXL2074	P5 ARM UNIT	1	
1-40		VMB1554	P5 SPRING	1	
1-41		VEH0437	UPPER CYLINDER UNIT	1	<M><R>
1-42		VEG0909	LOWER CYLINDER UNIT	1	<M><R>
1-43		VMD0910	POST STOPPER	2	
1-44		VXP1094	ROLLER POST (T) UNIT	1	
1-45		VXA3713	INCLINED BASE (T)(1) UNIT	1	
1-46		VXA2687	INCLINED ADJUSTMENT PLATE U	1	
1-47		VXP1093	ROLLER POST (S) UNIT	1	
1-48		VXA3249KIT	INCLINED BASE (S)	1	
1-49		VXA3980	HEAD CLEANING PLATE	1	
1-51		VEE8714	FLEXIBLE CABLE	1	
1-52		VMX1088	SUPPLY UPPER LIMITER	1	
1-53		VDP1304	SUPPLY ROLLER	1	
1-54		VMX1581	P1 COLLAR	1	
1-55		VMX1533	SUPPLY LOWER LIMITER	1	
1-56		VBS0038	FE HEAD	1	
1-58		VHN0110	ADJUST NUT	1	
1-59		VJS2964A013	CONNECTOR (15P)	1	
1-60		VMX1544	P4 UPPER LIMITER	1	
1-61		VMX1568	P4 SLEEVE	1	
1-62		VMX1534	P4 LOWER LIMITER	1	
1-63		VDG0664	CONNECTION GEAR	1	
1-64		VDG0483	PINCH SPEED DOWN GEAR	1	
1-65		VES0489	SAFETY SWITCH	1	
1-66		VXL2263	HEAD CLEANING UNIT	1	<M><R>
1-67		VMB2532	CLEANING SPRING	1	
1-68		VMT0321	HEAD CLEANING PAD	1	
1-69		VML2845	CAM LEVER	1	
1-70		VMB2672	CAM LEVER SPRING	1	
1-71		VMA8977	SOLENOID BASE	1	
1-72		VSJ0111	PINCH SOLENOID	1	
1-73		VMA6895	MOUNT PLATE (L)	1	
1-74		VMA6896	MOUNT PLATE (R)	1	
1-75		VXA5166	BIND FLEXIBLE UNIT	1	
1-76		VXA3520	LED UNIT	1	
1-77		VMD0911	LED HOLDER	1	
1-78		VMB2020	EARTH SPRING	1	
1-79		GL450	LED	1	
1-80		VMX1079	CUT WASHER	2	
1-81		XTV26+6F	SCREW	14	
1-82		XTV2+4F	SCREW	2	
1-83		XYN26+K5	SCREW	2	
1-84		XSN3+3.5	SCREW	2	
1-85		VHD0322	SCREW	1	
1-86		VHD0089B	SCREW	1	
1-87		XSN3D6FZ	SCREW	2	
1-88		VHN0063	M4 NYLON NUT	1	
1-89		XWE4	M4 NYLON WASHER	2	
1-90		VHD0374	SCREW	3	
1-91		VMX0653	CUT WASHER	2	
1-92		XWGV3D6G	POLLY SLIDER WASHER	1	
1-93		VHD0045	M3 NYLON NUT	1	
1-94		XWE3VW	M3 WASHER	1	
1-95		VHD0425	SCREW	2	
1-96		XTV26+10F	SCREW	4	
1-97		VHD0133	SCREW	2	
1-98		XYN26+F6FZ	SCREW	1	
1-99		XTN3+6F	SCREW	1	
1-100		VHD0342	SCREW	3	
1-101		XTV2+6J	SCREW	1	
1-102		XYN26+C4	SCREW	2	
1-103		XTW3+8TR	SCREW	2	
1-105		VMX0653	CUT WASHER	11	

② Moving Mechanism Section



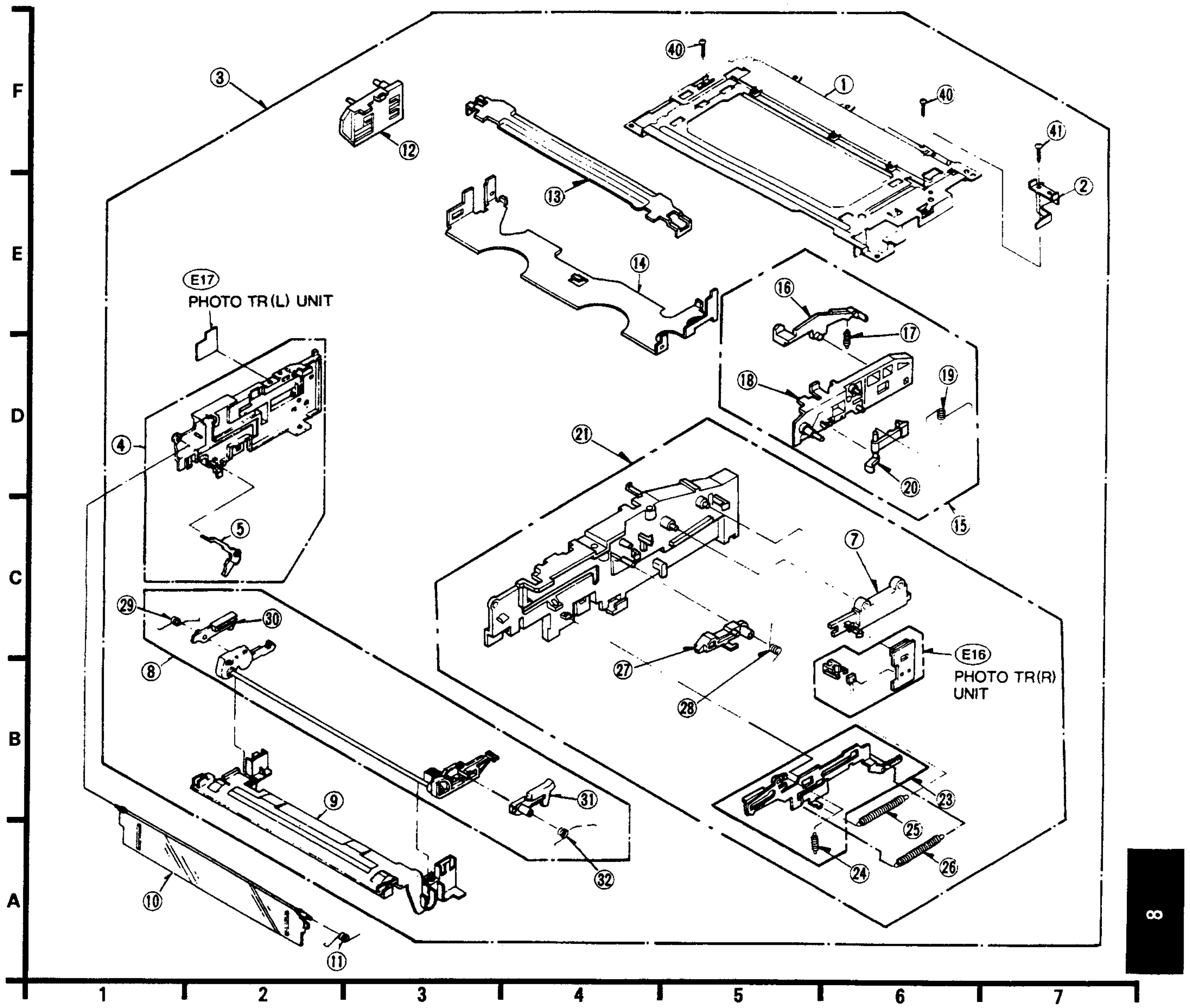
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
2-1	VXP1082	WORM SHAFT UNIT	1	
2-2	VDV0228	LOADING BELT	1	<M><R>
2-3	VDG0581	WORM WHEEL	1	
2-4	VDG0582	INTERMEDIATE GEAR	1	
2-5	VXA3646	GEAR BASE (1) UNIT	1	
2-6	VXS0098	EARTH SPRING UNIT	1	
2-8	VXA4839	STATOR BASE UNIT	1	
2-9	VMD0611	FG SUPPORT (1)	2	
2-10	VMD0621	FG SUPPORT (2)	2	
2-11	HW-300B	HOLE IC	2	<R>
2-12	VJP1230R	CONNECTOR (3P)	1	
2-13	VJP3202A008Z	CONNECTOR (8P)	1	
2-14	VJP1230T	CONNECTOR (3P)	1	
2-15	VSJ0066	SOLENOID	1	<!>
2-16	VXZ0270	MAIN BRAKE (S) UNIT	1	<R>
2-17	VMB1978	BRAKE SPRING	1	
2-18	VXZ0314	MAIN BLAKE (T) UNIT	1	<R>
2-23	VXR0187	TAKEUP REEL TABLE UNIT	1	<R>
2-24	VXR0225	SUPPLY REEL TABLE UNIT	1	<R>
2-25	VEK4097	STATOR UNIT	1	
2-26	VBK0063	MR HEAD	1	<R>
2-27	VJP1902	CONNECTOR	1	
2-28	VXP1328	ROTOR UNIT	1	
2-29	VMA6847	SUB PLATE	1	
2-30	VDG0580	CENTER GEAR	1	
2-31	VXP0878	RETANER GEAR UNIT	1	
2-32	VDG0342	RING GEAR	1	
2-33	VDG0578	MAIN CAM GEAR	1	
2-34	VDG0343	SUB CAM GEAR	1	
2-35	VXL1895	CAM FOLLOWER ARM UNIT	1	
2-36	VML1861	DETENT ARM	1	
2-37	VMM0218	MAIN ROD	1	
2-38	VXA3144	SECTOR GEAR UNIT	1	
2-39	VDG0579	LOADING CAM GEAR	1	
2-40	VDG0420	LOADING GEAR (T)	1	
2-41	VMB1555	LOADING SPRING (T)	1	
2-42	VDG0593	LOADING GEAR (S)	1	
2-43	VMB1746	LOADING SPRING (S)	1	
2-44	VXL1489	LOADING ARM (T)(1) UNIT	1	
2-45	VXL1487	LOADING ARM (S)(1) UNIT	1	
2-46	VML2304	CLEANING ROD	1	
2-47	VMA8003	MOUNT PLATE (B)	1	
2-70	XTV26+6F	SCREW	12	
2-71	VMX0653	CUT WASHER	2	
2-72	XYN2+F5	SCREW	2	
2-73	XSN26+4	SCREW	3	
2-74	XYEV0004	SCREW	3	
2-75	XYNV0015	SCREW	2	
2-76	XUEV3VW	WASHER	6	
2-77	XUEV3VW	CUT WASHER	3	
2-78	XTV3+8F	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
3-1	VMA7223	TOP PLATE	1	
3-2	VMA7224	CASSETTE HOLDER ANGLE	1	
3-3	VXA4535	CASSETTE COMPERTMENT UNIT	1	
3-4	VXA4467	SIDE PLATE (L)(1) UNIT	1	
3-5	VML1880	OPENER LEVER	1	
3-7	VSS0258	SLIDE SWITCH	1	
3-8	VXP0987	MAIN SHAFT UNIT	1	
3-9	VMA6900	CASSETTE GUIDE UNIT	1	
3-10	VKF1487	BLINDER PANEL	1	
3-11	VMB1258	BLINDER SPRING	1	
3-12	VMD1387	HOLDER GUIDE	1	
3-13	VXA3831	HOLDER ANGLE UNIT	1	
3-14	VMA8406	CASSETTE HOLDER	1	
3-15	VXA3780	HOLDER GUIDE (R) UNIT	1	
3-16	VML1882	DOOR OPEN LEVER	1	
3-17	VMB1584	DOOR OPEN LEVER SPRING	1	
3-18	VMD1352	HOLDER GUIDE (R)	1	
3-19	VMB2013	RELEASE SPRING	1	
3-20	VML2306	RELEASE LEVER	1	
3-21	VXA4076	SIDE PLATE (R)(1) UNIT	1	
3-22	VSS0258	SLIDE SWITCH	1	
3-23	VXA3497	SUB RACK UNIT	1	
3-24	VMB1962	RACK C SPRING	1	
3-25	VMB1943	CLUTCH SPRING (A)	1	
3-26	VMB1942	CLUTCH SPRING (B)	1	
3-27	VML2427	DOWN SUPPORT LEVER	1	
3-28	VMB1961	DOWN SUPPORT SPRING	1	
3-29	VMB1836	SUB WIPER SPRING (L)	1	
3-30	VML1876	SUB WIPER ARM (L)	1	
3-31	VML1877	SUB WIPER ARM (R)	1	
3-32	VMB1837	SUB WIPER SPRING (R)	1	
3-40	XTB26+8G	SCREW	2	
3-41	XTV26+6F	SCREW	1	
3-42	XTV26+8FR	SCREW	4	

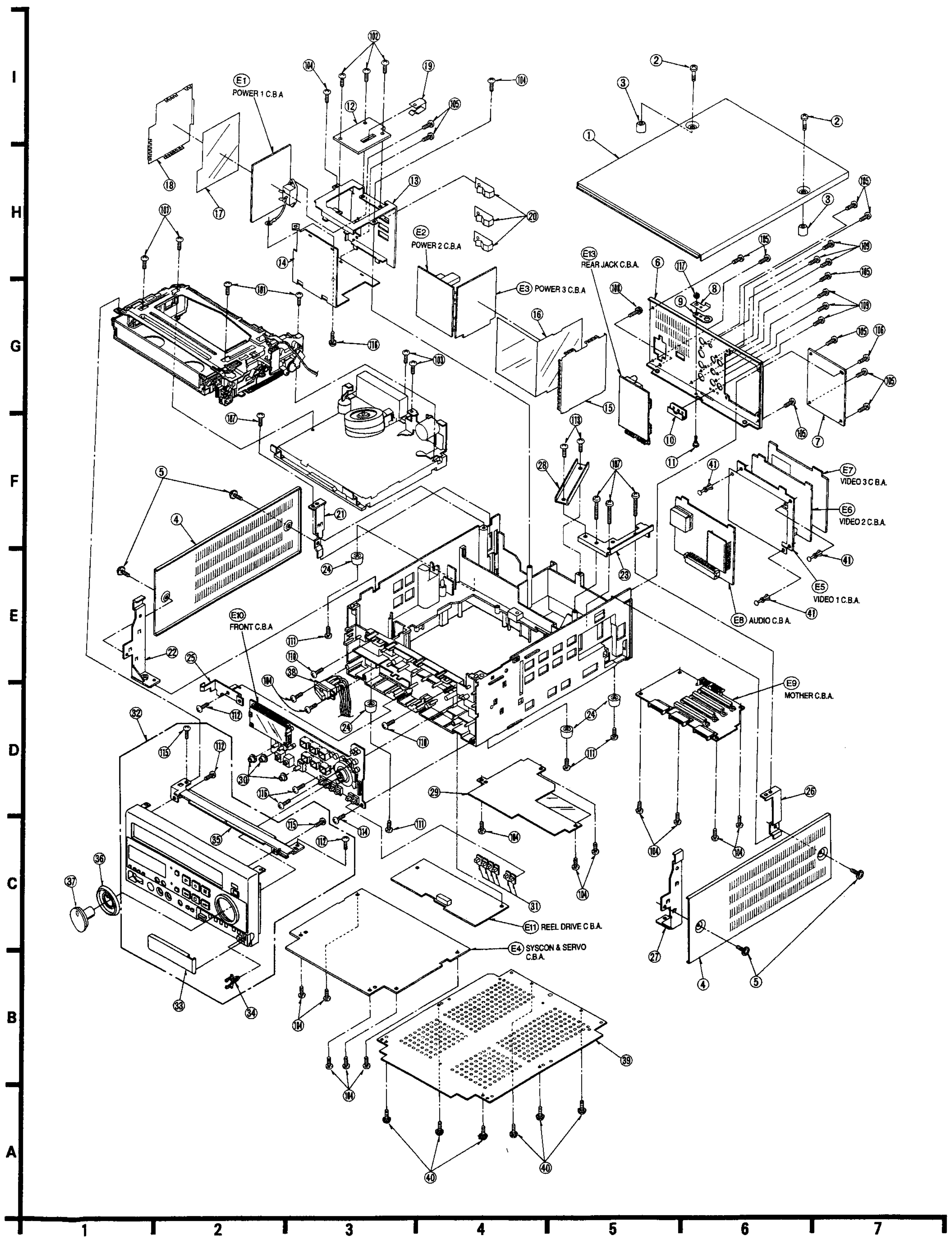
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
2-1	VXP1082	WORM SHAFT UNIT	1	
2-2	VDV0228	LOADING BELT	1	<M><R>
2-3	VDG0581	WORM WHEEL	1	
2-4	VDG0582	INTERMEDIATE GEAR	1	
2-5	VXA3646	GEAR BASE (1) UNIT	1	
2-6	VXS0098	EARTH SPRING UNIT	1	
2-8	VXA4839	STATOR BASE UNIT	1	
2-9	VMD0611	FG SUPPORT (1)	2	
2-10	VMD0621	FG SUPPORT (2)	2	
2-11	HW-300B	HOLE IC	2	<R>
2-12	VJP1230R	CONNECTOR (3P)	1	
2-13	VJP3202A008Z	CONNECTOR (8P)	1	
2-14	VJP1230T	CONNECTOR (3P)	1	
2-15	VSJ0066	SOLENOID	1	<!>
2-16	VXZ0270	MAIN BRAKE (S) UNIT	1	<R>
2-17	VMB1978	BRAKE SPRING	1	
2-18	VXZ0314	MAIN BLAKE (T) UNIT	1	<R>
2-23	VXR0187	TAKEUP REEL TABLE UNIT	1	<R>
2-24	VXR0225	SUPPLY REEL TABLE UNIT	1	<R>
2-25	VEK4097	STATOR UNIT	1	
2-26	VBK0063	MR HEAD	1	<R>
2-27	VJP1902	CONNECTOR	1	
2-28	VXP1328	ROTOR UNIT	1	
2-29	VMA6847	SUB PLATE	1	
2-30	VDG0580	CENTER GEAR	1	
2-31	VXP0878	RETANER GEAR UNIT	1	
2-32	VDG0342	RING GEAR	1	
2-33	VDG0578	MAIN CAM GEAR	1	
2-34	VDG0343	SUB CAM GEAR	1	
2-35	VXL1895	CAM FOLLOWER ARM UNIT	1	
2-36	VML1861	DETENT ARM	1	
2-37	VMM0218	MAIN ROD	1	
2-38	VXA3144	SECTOR GEAR UNIT	1	
2-39	VDG0579	LOADING CAM GEAR	1	
2-40	VDG0420	LOADING GEAR (T)	1	
2-41	VMB1555	LOADING SPRING (T)	1	
2-42	VDG0593	LOADING GEAR (S)	1	
2-43	VMB1746	LOADING SPRING (S)	1	
2-44	VXL1489	LOADING ARM (T)(1) UNIT	1	
2-45	VXL1487	LOADING ARM (S)(1) UNIT	1	
2-46	VML2304	CLEANING ROD	1	
2-47	VMA8003	MOUNT PLATE (B)	1	
2-70	XTV26+6F	SCREW	12	
2-71	VMX0653	CUT WASHER	2	
2-72	XYN2+F5	SCREW	2	
2-73	XSN26+4	SCREW	3	
2-74	XYEV0004	SCREW	3	
2-75	XYNV0015	SCREW	2	
2-76	XUEV3VW	WASHER	6	
2-77	XUEV3VW	CUT WASHER	3	
2-78	XTV3+8F	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
3-1	VMA7223	TOP PLATE	1	
3-2	VMA7224	CASSETTE HOLDER ANGLE	1	
3-3	VXA4535	CASSETTE COMPERTMENT UNIT	1	
3-4	VXA4467	SIDE PLATE (L)(1) UNIT	1	
3-5	VML1880	OPENER LEVER	1	
3-7	VSS0258	SLIDE SWITCH	1	
3-8	VXP0987	MAIN SHAFT UNIT	1	
3-9	VMA6900	CASSETTE GUIDE UNIT	1	
3-10	VKF1487	BLINDER PANEL	1	
3-11	VMB1258	BLINDER SPRING	1	
3-12	VMD1387	HOLDER GUIDE	1	
3-13	VXA3831	HOLDER ANGLE UNIT	1	
3-14	VMA8406	CASSETTE HOLDER	1	
3-15	VXA3780	HOLDER GUIDE (R) UNIT	1	
3-16	VML1882	DOOR OPEN LEVER	1	
3-17	VMB1584	DOOR OPEN LEVER SPRING	1	
3-18	VMD1352	HOLDER GUIDE (R)	1	
3-19	VMB2013	RELEASE SPRING	1	
3-20	VML2306	RELEASE LEVER	1	
3-21	VXA4076	SIDE PLATE (R)(1) UNIT	1	
3-22	VSS0258	SLIDE SWITCH	1	
3-23	VXA3497	SUB RACK UNIT	1	
3-24	VMB1962	RACK C SPRING	1	
3-25	VMB1943	CLUTCH SPRING (A)	1	
3-26	VMB1942	CLUTCH SPRING (B)	1	
3-27	VML2427	DOWN SUPPORT LEVER	1	
3-28	VMB1961	DOWN SUPPORT SPRING	1	
3-29	VMB1836	SUB WIPER SPRING (L)	1	
3-30	VML1876	SUB WIPER ARM (L)	1	
3-31	VML1877	SUB WIPER ARM (R)	1	
3-32	VMB1837	SUB WIPER SPRING (R)	1	
3-40	XTB26+8G	SCREW	2	
3-41	XTV26+6F	SCREW	1	
3-42	XTV26+8FR	SCREW	4	

③ Cassette Compartment Section



④ Chassis Frame Section



⑤

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
4-1	VGM1106	TOP PLATE	1	
4-2	VHD0222	SCREW	2	
4-3	VMX2248	TOP PANEL SPACER	2	
4-4	VGM1055	SIDE PLATE	2	
4-5	VHD0305	SCREW	4	
4-6	VXA5159	JACK PANEL	1	
4-7	VMP2376	RS-232C COVER	1	
4-8	VMC0993	HOOK SPRING	1	
4-9	VGK2091	HOOK	1	
4-10	VMP4250	SUPPORT ANGLE	1	
4-11	VHD0052	SCREW	1	
4-13	VSC4009	HEAT SINK (A)	1	
4-14	VSC4005	HEAT SINK (B)	1	
4-15	VSC4006	POWER SHIELD COVER (A)	1	
4-16	VMZ2247	SHIELD SHEET (B)	1	
4-17	VMZ2246	SHIELD SHEET (A)	1	
4-18	VSC4007	POWER SHIELD COVER (B)	1	
4-19	VMC0981	TR. SUPPORT SPRING (1)	1	
4-20	VMC0357	TR. SUPPORT SPRINT (2)	3	
4-21	VMP4254	SIDE PLATE ANGLE (REAR L)	1	
4-22	VXA5157	SIDE PLATE ANGLE (FRONT L)	1	
4-23	VMP4253	TOP PLATE ANGLE	1	
4-24	VKA0117	FOOT	4	
4-25	VMC1001	EARTH SPRING	1	
4-26	VMP4255	SIDE PLATE ANGLE (REAR R)	1	
4-27	VXA5158	SIDE PLATE ANGLE (FRONT R)	1	
4-28	VXA5160	P.C.B. SUPPORT ANGLE	1	
4-29	VMP3842	SHIELD PLATE	1	
4-30	VGU6509	VOLUME KNOB	3	
4-31	VGU6516	SLIDE KNOB	6	
4-32	VYP5452	FRONT PANEL	1	
4-33	VKW1848	OPERATION DOOR	1	
4-34	VGQ1442	PEACE	1	
4-35	VMP4247	LEINFORCE ANGLE	1	
4-36	VGU6554	SHUTTLE RING	1	
4-37	VXU1139	JOG DIAL	1	
4-38	VES0708	POWER SWITCH	1	
4-39	VKU0394	BOTTOM PLATE	1	
4-40	VHD0059	SCREW	6	
4-101	XTV26+8FR	SCREW	4	
4-103	XTW3+8TFR	SCREW	3	
4-104	XTV3+10JFR	SCREW	18	
4-105	XTB3+8FFZ	SCREW	9	
4-106	XTB3+12FFZ	SCREW	1	
4-107	XTV3+10G	SCREW	4	
4-108	XTB4+10FFN	SCREW	1	
4-109	XTV3+8GFZ	SCREW	5	
4-110	XTV4+8F	SCREW	2	
4-111	XTV3+16G	SCREW	4	
4-112	XTV3+8G	SCREW	3	
4-113	XTV3+8FFR	SCREW	2	
4-114	XTV4+10JFR	SCREW	1	
4-115	XTW3+10LR	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
5-1	VQT5833	OPERATING INSTRUCTIONS	1	
5-2	VPN3813	CUSHION (REAR)	1	
5-3	VPN3814	CUSHION (FRONT)	1	
5-4	VJA0746	POWER CORD	1	<!> ROUND PIN
5-4	VJA0738	POWER CORD	1	<!> SQUARE PIN
5-5	VPF0136	POWER CORD SHEET	1	
5-6	VPG7276	PACKING CASE	1	

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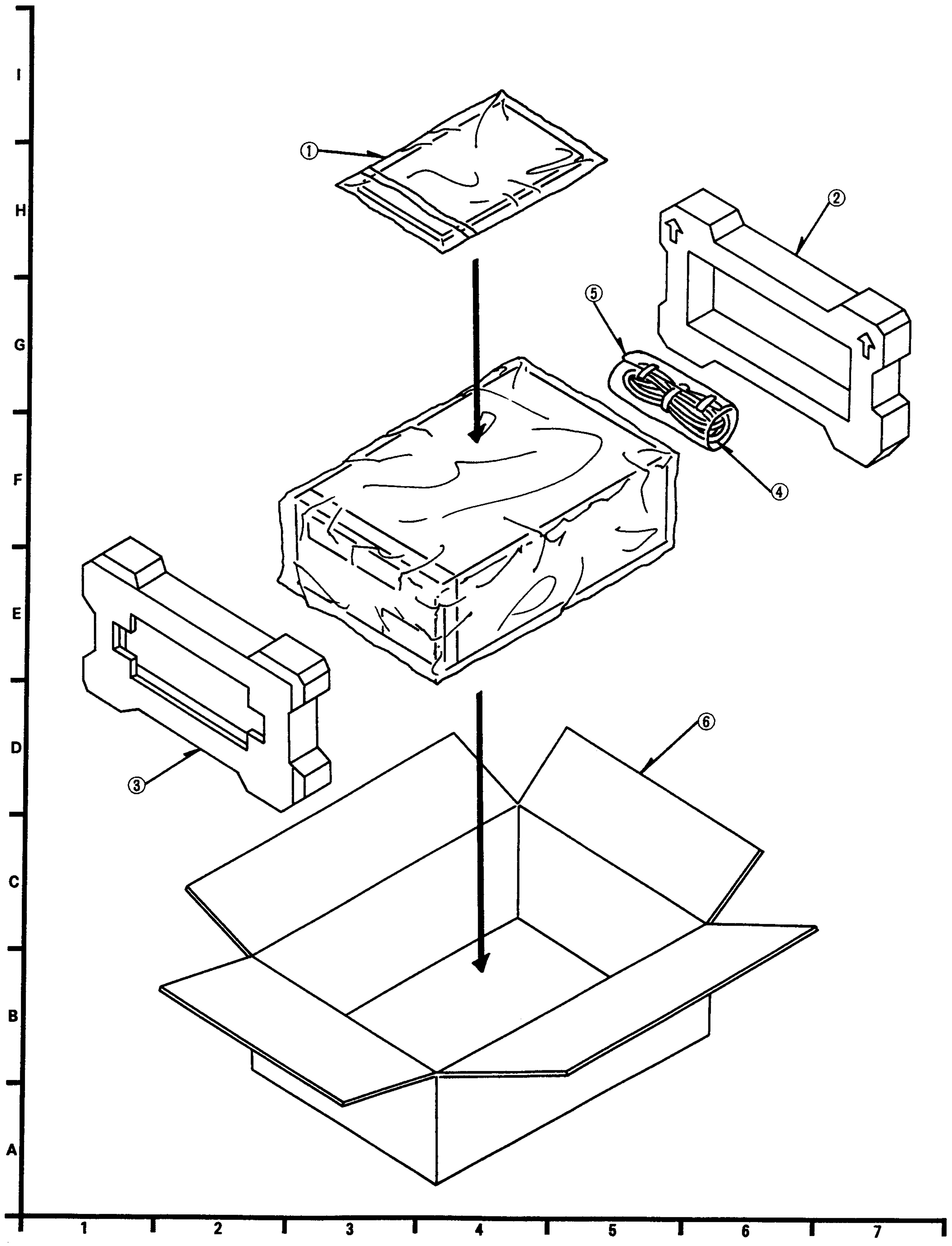
EXPLODED VIEWS AND REPLACEMENT PARTS LISTS

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
4-1		VGM1106	TOP PLATE	1	
4-2		VHD0222	SCREW	2	
4-3		VMX2248	TOP PANEL SPACER	2	
4-4		VGM1055	SIDE PLATE	2	
4-5		VHD0305	SCREW	4	
4-6		VXA5159	JACK PANEL	1	
4-7		VMP2376	RS-232C COVER	1	
4-8		VMC0993	HOOK SPRING	1	
4-9		VGK2091	HOOK	1	
4-10		VMP4250	SUPPORT ANGLE	1	
4-11		VHD0052	SCREW	1	
4-13		VSC4009	HEAT SINK (A)	1	
4-14		VSC4005	HEAT SINK (B)	1	
4-15		VSC4006	POWER SHIELD COVER (A)	1	
4-16		VMZ2247	SHIELD SHEET (B)	1	
4-17		VMZ2246	SHIELD SHEET (A)	1	
4-18		VSC4007	POWER SHIELD COVER (B)	1	
4-19		VMC0981	TR. SUPPORT SPRING (1)	1	
4-20		VMC0357	TR. SUPPORT SPRINT (2)	3	
4-21		VMP4254	SIDE PLATE ANGLE (REAR L)	1	
4-22		VXA5157	SIDE PLATE ANGLE (FRONT L)	1	
4-23		VMP4253	TOP PLATE ANGLE	1	
4-24		VKA0117	FOOT	4	
4-25		VMC1001	EARTH SPRING	1	
4-26		VMP4255	SIDE PLATE ANGLE (REAR R)	1	
4-27		VXA5158	SIDE PLATE ANGLE (FRONT R)	1	
4-28		VXA5160	P.C.B. SUPPORT ANGLE	1	
4-29		VMP3842	SHIELD PLATE	1	
4-30		VGU6509	VOLUME KNOB	3	
4-31		VGU6516	SLIDE KNOB	6	
4-32		VYP5452	FRONT PANEL	1	
4-33		VKW1848	OPERATION DOOR	1	
4-34		VGQ1442	PEACE	1	
4-35		VMP4247	LEINFORCE ANGLE	1	
4-36		VGU6554	SHUTTLE RING	1	
4-37		VXU1139	JOG DIAL	1	
4-38		VES0708	POWER SWITCH	1	
4-39		VKU0394	BOTTOM PLATE	1	
4-40		VHD0059	SCREW	6	
4-101		XTV26+8FR	SCREW	4	
4-103		XTW3+8TFR	SCREW	3	
4-104		XTV3+10JFR	SCREW	18	
4-105		XTB3+8FFZ	SCREW	9	
4-106		XTB3+12FFZ	SCREW	1	
4-107		XTV3+10G	SCREW	4	
4-108		XTB4+10FFN	SCREW	1	
4-109		XTV3+8GFZ	SCREW	5	
4-110		XTV4+8F	SCREW	2	
4-111		XTV3+16G	SCREW	4	
4-112		XTV3+8G	SCREW	3	
4-113		XTV3+8FFR	SCREW	2	
4-114		XTV4+10JFR	SCREW	1	
4-115		XTW3+10LR	SCREW	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
5-1		VQT5833	OPERATING INSTRUCTIONS	1	
5-2		VPN3813	CUSHION (REAR)	1	
5-3		VPN3814	CUSHION (FRONT)	1	
5-4		VJA0746	POWER CORD	1	<!> ROUND PIN
5-4		VJA0738	POWER CORD	1	<!> SQUARE PIN
5-5		VPF0136	POWER CORD SHEET	1	
5-6		VPG7276	PACKING CASE	1	

⑤ Packing Parts Section



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP04433A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		JACK		
	VEP01597A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		POWER INPUT		
	VEP01598A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		POWER (1)		
	VEP01599A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		POWER (2)		
	VEP00T76A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		MOTHER		
	VEP02399A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		REEL DRIVE		
	VEP03B32A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		VIDEO (1)		
	VEP00R78A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		CCD PACK		
	VEP03B33A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		VIDEO (2)		
	VEP04432B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		AUDIO		
	VEP04353B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		FM AUDIO PACK		
	VEP05162I	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		HEAD AMP		
	VEP06920B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		SYSCON & SERVO		
	VEP06921B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		FRONT		
	VEP08164B	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		VIDEO (3)		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
==========	VEP04433A	P.C.BOARD W/COMPONENT		
		JACK		
J6901	VJS3155	CONNECTOR (FEMALE)	1	
J6902	VJS3154	CONNECTOR (FEMALE)	1	
J6903	VJS3155	CONNECTOR (FEMALE)	1	
J6904	VJS3154	CONNECTOR (FEMALE)	1	
J6906,07	VJJ0323	RCA PIN JACK	2	
J6908	VJJ0322	RCA PIN JACK	1	
J6909	VJJ0169	REMOCON JACK	1	
P6901,02	VJP3490B10	CONNECTOR (MALE)	2	
		RESISTORS		
R6901-03	EROS2CKF75R0	M.RESISTOR 1/4W 75.0	3	
		MISCELLANEOUS		
	VMP4259	REAR MIC ANGLE	1	
==========	VEP01597A	P.C.BOARD W/COMPONENT		
		POWER INPUT		
		CAPACITORS		
C1101,02	ECQU2A224MN	P.CAPACITOR 100V 0.22U	2	<!>
F1101,02	XBA2C25TH15	FUSE	2	<!>
L1101	ELF18D618F	COIL	1	<!>
P1101	VJS2985	CONNECTOR (FEMALE)	1	
P1102	VJP2639	CONNECTOR (MALE)	1	
		RESISTORS		
R1101	ERC12GM334	S.RESISTOR 1/2W 330K	1	
		MISCELLANEOUS		
	VJF0318	FUSE HOLDER	4	
	VMZ0429	FUSE COVER	2	
	VMZ1305	CAPACITOR COVER	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
==========		VEP01598A	P.C.BOARD W/COMPONENT		
			POWER (1)		
			CAPACITORS		
C1001		ECQU2A224MN	P.CAPACITOR 100V 0.22U	1	<!>
C1002-05		VCK0041	C.CAPACITOR	4	<!>
C1012		ECEC2GC221DB	E.CAPACITOR 400V 220U	1	
C1013		ECQE6473KF	P.CAPACITOR	1	
C1014		ECKD3D151KB	C.CAPACITOR 2KV 150P	1	
C1015		ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1017		ECKF1H102KB	C.CAPACITOR 50V 100P	1	
C1018		ECA0GXLV331	E.CAPACITOR 4V 330U	1	
C1038		ECKF1H271KB	C.CAPACITOR 50V 270P	1	
D1001		D3SBA60	DIODE	1	<R><!>
D1005		MA723	DIODE	1	<R>
D1014		AP01C	DIODE	1	<R>
D1015		VSD0001	DIODE	1	<R>
D1016		MA4240-H	DIODE	1	<R>
IC1001		STRM6545LF	IC	1	<R><!>
L1001		ELF18D602	COIL	1	<!>
L1003		VLP0074	COIL	1	
L1009		EXCELSA35	COIL	1	
P1001		VJP2639	CONNECTOR (MALE)	1	
			RESISTORS		
R1001		ERF5TK2R2	W.RESISTOR 5W 2.2	1	<!>
R1002-04		ERG1SJ473	M.RESISTOR 1W 47K	3	
R1005		ERG3SJ393	M.RESISTOR 3W 39K	1	
R1006		ERDS2FJ221	C.RESISTOR 1/4W 220	1	
R1007		ERDS2FJ271	C.RESISTOR 1/4W 270	1	
R1008		ERDS2FJ471	C.RESISTOR 1/4W 470	1	
R1009		ERW1PKR56	W.RESISTOR 1W 0.56	1	
R1010		ERDS2FJ152	C.RESISTOR 1/4W 1.5K	1	
R1011		ERDS2FJ101	C.RESISTOR 1/4W 100	1	
R1012		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1019		ERDS2FJ224	C.RESISTOR 1/4W 220K	1	
R1020		ERDS1TJ395	C.RESISTOR 1/2W 3.9M	1	
R1021		ERDS1TJ475	C.RESISTOR 1/2W 4.7M	1	
			MISCELLANEOUS		
		VMZ0954	CAPACITOR COVER	4	
		VMZ1305	CAPACITOR COVER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
==========		VEP01599A	P.C.BOARD W/COMPONENT		
			POWER (2)		
			CAPACITORS		
C1019		ECA1AFZ331	E.CAPACITOR 10V 330U	1	
C1020		ECEA1AGE471	E.CAPACITOR 10V 470U	1	
C1021		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C1022-25		ECKF1H103ZF	C.CAPACITOR 50V 1000P	4	
C1026		ECEA1HFS101	E.CAPACITOR 50V 100U	1	
C1027		ECA1VFQ681	E.CAPACITOR 35V 680U	1	
C1028		ECEA1VGE471	E.CAPACITOR 35V 470U	1	
C1029		ECEA1CGE221	E.CAPACITOR 16V 220U	1	
C1030		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1031		ECA1EFZ471	E.CAPACITOR 25V 470U	1	
C1032		ECEA1EGE471	E.CAPACITOR 25V 470U	1	
C1033		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1034		ECA1AFZ122	E.CAPACITOR 10V 1.2U	1	
C1035		ECKF1H103ZF	C.CAPACITOR 50V 1000P	1	
C1036		ECEA1AGE221	E.CAPACITOR 10V 220U	1	
C1037		ECKD2H221KB	C.CAPACITOR 500V 220P	1	
D1006		AK04	DIODE	1	<R>
D1007		VSD0001	DIODE	1	<R>
D1008		RL4Z	DIODE	1	<R>
D1010		FMLG12SP	DIODE	1	<R>
D1011		FMB-G14L	DIODE	1	<R>
D1012		UPC1093J	DIODE	1	<R>
D1017		RL4Z	DIODE	1	<R>
IC1002		SI3120CA	IC	1	<R>
L1004		VLQ0410	COIL	1	
L1005,06		VLQ0592	COIL	2	
L1007		VLQEL06F101J	COIL 100UH	1	
L1008		VLP0083	COIL	1	
P1002,03		VJP3324	CONNECTOR (MALE)	2	
Q1001		PC111LY1	TRANSISTOR	1	<R><!>
			RESISTORS		
R1013		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1014		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1015		EROS2CKG1801	M.RESISTOR 1/4W 1.8K	1	
R1016		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1017		EROS2CKG1301	M.RESISTOR 1/4W 1.3K	1	
R1018		ERQ12HJ4R7	F.RESISTOR 1/2W 4.7	1	<!>
T1001		VLT0731	TRANSFORMER	1	<!>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
==========	VEP00T76A	P.C.BOARD W/COMPONENT		
		MOTHER		
P911,12	VJS3324	CONNECTOR (FEMALE)	2	
P931,32	VJS2898A050	CONNECTOR (FEMALE)	2	
P941	VJS2898A050	CONNECTOR (FEMALE)	1	
P962-64	VJP3203A020Z	CONNECTOR (MALE)	3	
P972	VJS2889A021	CONNECTOR (FEMALE)	1	
P983	VJS2898A050	CONNECTOR (FEMALE)	1	
P994,95	VJS3490A10	CONNECTOR (FEMALE)	2	
		MISCELLANEOUS		
	XNG26BFZ	NUT	8	
	XYN26+C8FZ	SCREW	8	
==========	VEP02399A	P.C.BOARD W/COMPONENT		
		REEL DRIVE		
		CAPACITORS		
C2701	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C2702	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2703	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2704	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2705	ECQV1H564JZ	P.CAPACITOR 50V 0.56U	1	
C2706-08	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	3	
C2709-12	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2713	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2714	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2715-17	ECEA0JKA470	E.CAPACITOR 6.3V 47U	3	
C2718	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C2719	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2720	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2721	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2722	ECQV1H564JZ	P.CAPACITOR 50V 0.56U	1	
C2723-25	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	3	
C2726-29	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
D2701	MA151K	DIODE	1	<R>
D2702	MA151WK	DIODE	1	<R>
D2703	MA151K	DIODE	1	<R>
D2704	MA153	DIODE	1	<R>
D2705	MA151K	DIODE	1	<R>
D2706	MA151WK	DIODE	1	<R>
D2707	MA151K	DIODE	1	<R>
D2708	MA153	DIODE	1	<R>
IC2701,02	XRA6435S	IC	2	<R>
IC2703	LM358PS-R	IC	1	<R>
IC2704	MC14053BF	IC	1	<R>
IC2705	LM339NS	IC	1	<R>
IC2706	LM358PS-R	IC	1	<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
J2701	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
L2701-04	VLQ0460	COIL	4	
P2701	VJS3135	CONNECTOR (FEMALE)	1	
P2702	VJS2149W	CONNECTOR (FEMALE)	1	
P2703	VJS3202B008	CONNECTOR (FEMALE)	1	
P2704,05	VJS1412	CONNECTOR (FEMALE)	2	
Q2701	MSD601-R	TRANSISTOR	1	<R>
QR2701	MRN1404	TRANSISTOR-RESISTOR	1	<R>
		RESISTORS		
R2701	ERJ6GEYG102	M.RESISTOR CH1/16W 1K	1	
R2702,03	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2704	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R2705	ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1	
R2706	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R2707,08	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2709	ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1	
R2710	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R2711	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2712	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2713,14	ERDS2TJ330	C.RESISTOR 1/4W 33	2	
R2715	ERX12SJ1R0	M.RESISTOR 1/2W 1.0	1	
R2716	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2717	ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1	
R2718	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R2719	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
R2720	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R2721	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2722,23	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	2	
R2724	ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
R2725,26	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R2727	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R2728	ERJ6GEYJ823	M.RESISTOR CH1/16W 82K	1	
R2729,30	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2731	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R2732	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2733	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2734,35	ERDS2TJ330	C.RESISTOR 1/4W 33	2	
R2736	ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
R2737	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2738	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2739	ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R2740	ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
R2741,42	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R2743	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
W93-99	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	7	
W100-09	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	10	
		MISCELLANEOUS		
	VMX2183	P.C.B. SPACER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
==========		VEP03B32A	P.C.BOARD W/COMPONENT		
			VIDEO (1)		
		VEP00R78A	P.C.BOARD W/COMPONENT		
			CCD PACK		
			CAPACITORS		
C1		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C2		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C4-C6		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7		ECEA1HKS4R7	E.CAPACITOR 50V 4.7U	1	
C8		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C10		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C11		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C12		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3001		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3002		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3003		ECEV1HV4R7	E.CAPACITOR 50V 4.7U	1	
C3004,05		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3006		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C3007		ECEV1CV470	E.CAPACITOR 16V 47U	1	
C3008		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3009		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C3010		ECEV1EN4R7Q	E.CAPACITOR 25V 4.7U	1	
C3011,12		ECEV1CV100	E.CAPACITOR 16V 10U	2	
C3013		ECEV1CV220	E.CAPACITOR 16V 22U	1	
C3014		ECEV1EV4R7	E.CAPACITOR 25V 4.7U	1	
C3015		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3016		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3017		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3020		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C3024		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3025		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3026		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3027		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3028		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C3029,30		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3031		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C3032		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C3033		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3034		ECEV1HV010	E.CAPACITOR 50V 1U	1	
C3035,36		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3037		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3038		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3039		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C3040		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C3041		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3042		ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3043		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3047		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3048		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3049		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3050		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C3051		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3052		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3053		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3055-59		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C3060		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C3061		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3062,63		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C3064		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C3065		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3066		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C3069-72		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C3073,74		ECEV1CV470	E.CAPACITOR 16V 47U	2	
C3075		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3076		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3077		ECEV1HV010	E.CAPACITOR 50V 1U	1	
C3090		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3091		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3092		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C3093		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3094		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C3095		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3096		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3097		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C3098		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3099		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C3100		ECEV1CV100	E.CAPACITOR 16V 10U	1	
C3101,02		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
C3801		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3802		ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C3803		ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C3804		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C3805,06		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3808		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C3809		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C3810		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3813		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3814		ECEV1EV4R7	E.CAPACITOR 25V 4.7U	1	
C3817		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3818		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3819		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3820		ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C3821		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3824		ECEV1EV4R7	E.CAPACITOR 25V 4.7U	1	
C3830		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3831		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3832,33		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3834		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3835		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3837		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3838		ECUM1C474ZFN	C.CAPACITOR CH 16V 0.47U	1	
C3839,40		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C3841,42		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3843		ECEV1HVR47Q	E.CAPACITOR 50V 0.47U	1	
C3844		ECEV1HV010	E.CAPACITOR 50V 1U	1	
C3845		ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C3847		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3848		ECEV1CV470	E.CAPACITOR 16V 47U	1	
C3850		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D1		MA3091-M	DIODE	1	<R>
D3001,02		MA151K	DIODE	2	<R>
D3005-08		MA151K	DIODE	4	<R>
D3801		MA153	DIODE	1	<R>
D3802		MA151K	DIODE	1	<R>
DL3801		VLD0147	DELAY	1	
DL3803		VLD0089	DELAY	1	
FL3001		VLF0729	FILTER	1	
FL3002		VLF0639	FILTER	1	
FL3003		ELB4M022	FILTER	1	
FL3004		ELB5A066	FILTER	1	
FL3005		ELB4K114	FILTER	1	
FL3006		ELB4R031	FILTER	1	
FL3007		ELB4K114	FILTER	1	
FL3801		VLF0996	FILTER	1	
FL3802		VLF0299	FILTER	1	
FL3803		VLF0965	FILTER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC1	MSM6871RS	IC	1	<R>
IC1	M52370FP	IC	1	<R>
IC3002	VEFH20B	IC	1	<R>
IC3003	M52054FP	IC	1	<R>
IC3004	UPC2405HF	IC	1	<R>
IC3005	AN6308S	IC	1	<R>
IC3006	VEP00R78A	P.C.BOARD W/COMPONENT	1	<R>
IC3801	VCR0380	IC	1	<R>
IC3804	TL8823F	IC	1	<R>
L1	VLQ0460	COIL	1	
L3001	VLQ0163J121	COIL 120UH	1	
L3002-04	VLQ0163J101	COIL 100UH	3	
L3005	VLQ0163J470	COIL 47UH	1	
L3006	VLQ0319K220	COIL 22UH	1	
L3011,12	VLQ0163J220	COIL 22UH	2	
L3013	VLQ0163J151	COIL 150UH	1	
L3014	VLQ0163J6R8	COIL 6.8UH	1	
L3015	VLQ0163J4R7	COIL 4.7UH	1	
L3016	VLQ0163J151	COIL 150UH	1	
L3018	VLQ0163J181	COIL 180UH	1	
L3019	VLQ0163J270	COIL 27UH	1	
L3020	VLQ0319K220	COIL 22UH	1	
L3021	VLQ0163J5R6	COIL 5.6UH	1	
L3022	VLQ0163J101	COIL 100UH	1	
L3023	VLQ0163J120	COIL 12UH	1	
L3025	VLQ0163J100	COIL 10UH	1	
L3026	VLQ0163J220	COIL 22UH	1	
L3029	VLQ0163J100	COIL 10UH	1	
L3032	VLQ0163J560	COIL 56UH	1	
L3033	VLQ0163J820	COIL 82UH	1	
L3034,35	VLQ0163J151	COIL 150UH	2	
L3036	VLQ0163J101	COIL 100UH	1	
L3801	VLQ0133J821	COIL 820UH	1	
L3802	VLQ0163J151	COIL 150UH	1	
L3803	VLQ0133J391	COIL 390UH	1	
L3805	VLQ0163J220	COIL 22UH	1	
L3806	VLQ0319K220	COIL 22UH	1	
L3808	VLQ0163J150	COIL 15UH	1	
L3811,12	VLQ0163J150	COIL 15UH	2	
L3813	VLQ0319K220	COIL 22UH	1	
L3815	VLQ0133J681	COIL 680UH	1	
L3816	VLQ0319K220	COIL 22UH	1	
P1	VJR0231	CONNECTOR 6P	1	
P3001	VJP3176B050	CONNECTOR (MALE)	1	
P3002	VJP3079	CONNECTOR (MALE)	1	
Q1-Q3	MSC2295-B	TRANSISTOR	3	<R>
Q3001	MSC2295-B	TRANSISTOR	1	<R>
Q3002	MSD601-R	TRANSISTOR	1	<R>
Q3003,04	MSC2295-B	TRANSISTOR	2	<R>
Q3007	MSC2295-B	TRANSISTOR	1	<R>
Q3008,09	MSD601-R	TRANSISTOR	2	<R>
Q3010,11	MSC2295-B	TRANSISTOR	2	<R>
Q3012	MSD601-R	TRANSISTOR	1	<R>
Q3013	MSC2295-B	TRANSISTOR	1	<R>
Q3014	MSB709-R	TRANSISTOR	1	<R>
Q3015	MSD601-R	TRANSISTOR	1	<R>
Q3016	MSC2295-B	TRANSISTOR	1	<R>
Q3017	MSD601-R	TRANSISTOR	1	<R>
Q3018	2SD1330	TRANSISTOR	1	<R>
Q3022	MSD601-R	TRANSISTOR	1	<R>
Q3023	MSC2295-B	TRANSISTOR	1	<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q3024	MSD601-R	TRANSISTOR	1	<R>
Q3801	MSC2295-B	TRANSISTOR	1	<R>
Q3802	MSD601-R	TRANSISTOR	1	<R>
Q3803	MSC2295-B	TRANSISTOR	1	<R>
Q3804	MSB709-R	TRANSISTOR	1	<R>
Q3805	MSC2295-B	TRANSISTOR	1	<R>
Q3806	MSB709-R	TRANSISTOR	1	<R>
Q3811	MSD601-R	TRANSISTOR	1	<R>
Q3812	MSC2295-B	TRANSISTOR	1	<R>
Q3813	MSB709-R	TRANSISTOR	1	<R>
Q3814	MSD601-R	TRANSISTOR	1	<R>
Q3815	MSC2295-B	TRANSISTOR	1	<R>
Q3816	MSD601-R	TRANSISTOR	1	<R>
QR3002-04	MRN1404	TRANSISTOR-RESISTOR	3	<R>
QR3005	MRN2404	TRANSISTOR-RESISTOR	1	<R>
QR3006,07	MRN1404	TRANSISTOR-RESISTOR	2	<R>
QR3009	MRN1403	TRANSISTOR-RESISTOR	1	<R>
QR3011	MRN2404	TRANSISTOR-RESISTOR	1	<R>
QR3012,13	MRN1404	TRANSISTOR-RESISTOR	2	<R>
QR3801	MRN1404	TRANSISTOR-RESISTOR	1	<R>
QR3803	MRN1404	TRANSISTOR-RESISTOR	1	<R>
		RESISTORS		
R1	ERJ6GEYG151	M.RESISTOR CH1/16W 150	1	
R2	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R4,R5	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R6	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R7	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R8	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3001	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3002	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3003	ERJ6GEYJ911	M.RESISTOR CH1/16W 910	1	
R3004	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R3005	ERJ6GEYJ112	M.RESISTOR CH1/16W 1.1K	1	
R3006	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3007	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3008	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3010	ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1	
R3011	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3012	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
R3013	ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R3014	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3015	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
R3016,17	ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	2	
R3021	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R3023	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3027	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3033	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
R3034	ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1	
R3035	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3036	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3037	ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
R3038	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R3039	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R3040	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3041	ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	
R3042	ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R3043	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R3045	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3046	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3047	ERJ6GEYJ431	M.RESISTOR CH1/16W 430	1	
R3048	ERJ6GEYG151	M.RESISTOR CH1/16W 150	1	
R3049	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3054	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3055	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R3058	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3059	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3060,61	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3062	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3063		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3064		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3065		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3066		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R3067		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3068		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3069		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3070		ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R3071		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3072,73		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	2	
R3075		ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R3076		ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1	
R3077		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R3078		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R3079		ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R3080		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3081,82		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R3083		ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R3084		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3085		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R3086		ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R3087		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3088		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3089		ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	
R3090		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3091		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3092		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3093		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3094		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R3103		ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
R3104		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R3105		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R3106		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3107		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3108		ERJ6GEYJ162	M.RESISTOR CH1/16W 1.6K	1	
R3109		ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R3110		ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R3113		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3115,16		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3117		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3118,19		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R3120		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3121		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3122		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3123		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3124		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3125		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3126		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3127		ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1	
R3128		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3129		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3130		ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R3131-33		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	3	
R3134		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3801		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3802		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3804		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3805		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3806		ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
R3807		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3808		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3809		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3810		ERJ6GEYG151	M.RESISTOR CH1/16W 150	1	
R3811		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3812,13		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R3814,15		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	2	
R3816,17		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3818		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R3819		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3820,21		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R3822-26		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	5	
R3828		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3830		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3831		ERJ6GEYJ271	M.RESISTOR CH1/16W 270	1	
R3837		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3840		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3841		ERJ6GEYJ393	M.RESISTOR CH1/16W 39K	1	
R3842		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3843		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3844		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3851		ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
R3852		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3853		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3854,55		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	2	
R3856,57		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R3858,59		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	2	
R3860		ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R3861-63		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	3	
R3864		ERJ6GEYJ470	M.RESISTOR CH1/16W 47	1	
R3865		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3866,67		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3868		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3869		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3878,79		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3880		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
VR3001		EVM7JGA00B13	V.RESISTOR	1	
VR3002		EVM7DGA00B52	V.RESISTOR 500	1	
VR3003		EVM7DGA00B53	V.RESISTOR 5K	1	
VR3004		EVM7DGA00B14	V.RESISTOR 10K	1	
VR3005		EVM7JGA00B24	V.RESISTOR	1	
VR3006		EVM7DGA00B54	V.RESISTOR	1	
VR3007		EVM7JGA00B14	V.RESISTOR	1	
VR3008		EVM7DGA00B13	V.RESISTOR 1K	1	
VR3009		EVM7DGA00B52	V.RESISTOR 500	1	
VR3803		EVM7JGA00B13	V.RESISTOR	1	
VR3806		EVM7JGA00B13	V.RESISTOR	1	
X1		VSX0316	CRYSTAL OSCILLATOR	1	<R>
X3801		VSX0162	CRYSTAL OSCILLATOR	1	<R>
			MISCELLANEOUS		
		VMZ2245	INSULATION SHEET	1	
		VHN0030	RIVET	3	
==========		VEP03B33A	P.C.BOARD W/COMPONENT		
			VIDEO (2)		
			CAPACITORS		
C3301		ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C3302		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3303		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C3304,05		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	2	
C3306		ECEV1HVR22Q	E.CAPACITOR 50V 0.22U	1	
C3307		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3308		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C3309		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3310		ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3311		ECEV1HV4R7	E.CAPACITOR 50V 4.7U	1	
C3312		ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C3313		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3314		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C3315		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3316		ECUM1C105KBM	C.CAPACITOR CH 16V 1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3317	ECEV1EV330	E.CAPACITOR 25V 33U	1	
C3318	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C3319	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C3320	ECEV1HVR47Q	E.CAPACITOR 50V 0.47U	1	
C3321	ECEV1HVR22Q	E.CAPACITOR 50V 0.22U	1	
C3322	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C3323	ECEV1HN4R7S	E.CAPACITOR 50V 4.7U	1	
C3324	ECEV1HN010	E.CAPACITOR 50V 1U	1	
C3325,26	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3327	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3328	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3329	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C3330	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3332	ECEV1HV4R7	E.CAPACITOR 50V 4.7U	1	
C3333	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3334	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3335	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C3336	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C3337,38	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3339	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3340,41	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3342,43	ECEV1EN4R7Q	E.CAPACITOR 25V 4.7U	2	
C3344	ECEV1EV4R7	E.CAPACITOR 25V 4.7U	1	
C3345	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C3346	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3347	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3348	ECEV0GV221	E.CAPACITOR 4V 220U	1	
C3349	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C3350	ECEV0GV221	E.CAPACITOR 4V 220U	1	
C3351	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C3352,53	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3354	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3355	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3356	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3357	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C3358	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	1	
C3359,60	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C3361	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	1	
C3362-65	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	4	
C3366	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3367	ECEV1HN010	E.CAPACITOR 50V 1U	1	
C3368	ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C3369	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3370	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3371-75	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C3378-80	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C3381	ECUM1E273KBN	C.CAPACITOR CH 25V 0.027U	1	
C3382	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3383,84	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3385	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3386-89	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C3390	ECEV0JN470	E.CAPACITOR 6.3V 47U	1	
C3391	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C3392	ECEV1HV4R7	E.CAPACITOR 50V 4.7U	1	
C3395	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3396	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3398	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3399-01	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	3	
C3403,04	ECEV0GV221	E.CAPACITOR 4V 220U	2	
C3405	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3407	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C3408	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C3409	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C3410	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3411	ECV1ZW40X60	V.CAPACITOR 20P	1	
C3412	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
D3301-04	MA151K	DIODE	4	<R>
FL3301	VLF1024	FILTER	1	
FL3302	ELB4Q072	FILTER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FL3303	VLD0129	FILTER	1	
IC3301	M50458-001FP	IC	1	<R>
IC3302	MN1382-R	IC	1	<R>
IC3303	AN3296S	IC	1	<R>
IC3304	M52065FP	IC	1	<R>
IC3305	AN3581S	IC	1	<R>
IC3306	M52350FP	IC	1	<R>
IC3308	UPC2405HF	IC	1	<R>
IC3309	UPC78L05J	IC	1	<R>
IC3310	NJM2233BMA	IC	1	<R>
L3301,02	VLQ0163J220	COIL 22UH	2	
L3303	VLQ0163J150	COIL 15UH	1	
L3305-07	VLQ0163J220	COIL 22UH	3	
L3308	VLQ0319K220	COIL 22UH	1	
L3312-14	VLQ0163J220	COIL 22UH	3	
P3301	VJP3176B050	CONNECTOR (MALE)	1	
Q3301	MSB709-R	TRANSISTOR	1	<R>
Q3302-05	MSD601-R	TRANSISTOR	4	<R>
Q3306	2SA1022-B	TRANSISTOR	1	<R>
Q3307,08	MSC2295-B	TRANSISTOR	2	<R>
Q3309	2SA1022-B	TRANSISTOR	1	<R>
Q3310,11	MSD601-R	TRANSISTOR	2	<R>
Q3312	MSB709-R	TRANSISTOR	1	<R>
Q3313-15	MSD601-R	TRANSISTOR	3	<R>
Q3316	MSB709-R	TRANSISTOR	1	<R>
Q3319	MSD601-R	TRANSISTOR	1	<R>
Q3321	MSD601-R	TRANSISTOR	1	<R>
Q3322	MSC2295-B	TRANSISTOR	1	<R>
Q3323	MSD601-R	TRANSISTOR	1	<R>
Q3324	MSC2295-B	TRANSISTOR	1	<R>
Q3325,26	MSD601-R	TRANSISTOR	2	<R>
Q3328	MSD601-R	TRANSISTOR	1	<R>
QR3301-03	MRN1404	TRANSISTOR-RESISTOR	3	<R>
		RESISTORS		
R3301,02	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	2	
R3303	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3304	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3305	ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	
R3306	ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3307	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3308	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3309	ERJ6GEYJ684	M.RESISTOR CH1/16W 680K	1	
R3310	ERJ6GEYJ753	M.RESISTOR CH1/16W 75K	1	
R3311	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3312	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3313	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R3314	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R3315	ERJ6GEYJ683	M.RESISTOR CH1/16W 68K	1	
R3316	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R3317	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3318	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R3319	ERJ6GEYJ564	M.RESISTOR CH1/16W 560K	1	
R3320	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3321	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3322,23	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	2	
R3324	ERJ6GEYJ392	M.RESISTOR CH1/16W 3.9K	1	
R3325	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3326		ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R3328		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3329		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3330		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3331		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3332		ERJ6GEYJ621	M.RESISTOR CH1/16W 620	1	
R3333		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R3334,35		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3336		ERJ6GEYJ563	M.RESISTOR CH1/16W 56K	1	
R3337		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R3338		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3339-41		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	3	
R3342		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3344		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3345		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3346		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R3347,48		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3349		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3351		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3352		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3353		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3354		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R3355		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3356		ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1	
R3357		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3358		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3359		ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R3360,61		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3369		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3371		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R3372		ERJ6GEYJ132	M.RESISTOR CH1/16W 1.3K	1	
R3373		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R3374		ERJ6GEYJ474	M.RESISTOR CH1/16W 470K	1	
R3375		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R3376		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3377		ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
R3378		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3379		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R3380		ERJ6GEYJ823	M.RESISTOR CH1/16W 82K	1	
R3381,82		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	2	
R3383		ERJ6GEYJ154	M.RESISTOR CH1/16W 150K	1	
R3384		ERJ6GEYJ683	M.RESISTOR CH1/16W 68K	1	
R3385		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R3386		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R3388		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R3389		ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R3390		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R3391		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R3392		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R3393		ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1	
R3394		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R3398,99		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R3400		ERJ6GEYJ821	M.RESISTOR CH1/16W 820	1	
R3401		ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R3402		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R3403		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3404		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R3406		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R3407		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3408		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R3409		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3411		ERJ6GEYJ393	M.RESISTOR CH1/16W 39K	1	
R3412		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3413		ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1	
R3414		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R3416		ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R3423		ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
R3425		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R3426		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R3428-30		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	3	
R3432		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3433		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R3435-37		ERJ6GEYJ750	M.RESISTOR CH1/16W 75	3	
R3438		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3439		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3440		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R3441		ERJ6GEYJ821	M.RESISTOR CH1/16W 820	1	
VR3301		EVM7DGA00B15	V.RESISTOR 100K	1	
VR3302,03		EVM7DGA00B54	V.RESISTOR	2	
VR3304		EVM7DGA00B13	V.RESISTOR 1K	1	
VR3305		EVM7DGA00B52	V.RESISTOR 500	1	
X3301		VSX0114	CRYSTAL OSCILLATOR	1	<R>
==========		VEP04432B	P.C.BOARD W/COMPONENT		
			AUDIO		
		VEP04353B	P.C.BOARD W/COMPONENT		
			FM AUDIO PACK		
			CAPACITORS		
C401,02		ECEV1CAN4R7	E.CAPACITOR 16V 4.7U	2	
C405		ECHU1C682JA	P.CAPACITOR 0.68U	1	
C406		ECUM1H102JN	C.CAPACITOR CH 50V 1000P	1	
C407		ECHU1C223JA	P.CAPACITOR 0.022U	1	
C408		ECEV1EA100	E.CAPACITOR 25V 10U	1	
C409		ECHU1C223JA	P.CAPACITOR 0.022U	1	
C410		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C411		ECEV1CA470	E.CAPACITOR 16V 47U	1	
C412		ECHU1C103JA	P.CAPACITOR 0.01U	1	
C413		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C414-16		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	3	
C417		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C418		ECWV1E104JS	P.CAPACITOR 25V	1	
C419		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C420		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C421-23		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C424		ECWV1E154JS	P.CAPACITOR 25V	1	
C425		ECWV1E104JS	P.CAPACITOR 25V	1	
C426		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C427		ECUM1H102JN	C.CAPACITOR CH 50V 1000P	1	
C428		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C431		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C432		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C433		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C434		ECWV1E104JS	P.CAPACITOR 25V	1	
C435		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C436-38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	3	
C439		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C440		ECHU1C103JA	P.CAPACITOR 0.01U	1	
C441		ECEV1CA470	E.CAPACITOR 16V 47U	1	
C442		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C443		ECHU1C223JA	P.CAPACITOR 0.022U	1	
C444		ECEV1EA100	E.CAPACITOR 25V 10U	1	
C445		ECUM1H102JN	C.CAPACITOR CH 50V 1000P	1	
C446		ECHU1C223JA	P.CAPACITOR 0.022U	1	
C447		ECHU1C682JA	P.CAPACITOR 0.68U	1	
C449		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C450-52		ECEV1HA3R3	E.CAPACITOR 50V 3.3U	3	
C453,54		ECEV1CA100	E.CAPACITOR 16V 10U	2	
C455		ECEV1CA470	E.CAPACITOR 16V 47U	1	
C456		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C457		ECEV1CA220	E.CAPACITOR 16V 22U	1	
C458		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C459,60		ECEV0JA470	E.CAPACITOR 6.3V 47U	2	
C461,62		ECEV1HA010	E.CAPACITOR 50V 1U	2	
C463		ECWV1E124JS	P.CAPACITOR 25V	1	
C4001-03		ECEV1CV100	E.CAPACITOR 16V 10U	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4004	ECUX1C104ZFV	C.CAPACITOR 16V	1	
C4005	ECEA1CU471	E.CAPACITOR 16V 470U	1	
C4006	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4007	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C4008	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C4009,10	ECEV1CV100	E.CAPACITOR 16V 10U	2	
C4011	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C4027	ECEV1EV330	E.CAPACITOR 25V 33U	1	
C4028	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4029	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C4030	ECHU1C183JA	P.CAPACITOR 0.018U	1	
C4031	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C4032	ECHU1C183JA	P.CAPACITOR 0.018U	1	
C4033,34	ECHU1C472JA	P.CAPACITOR 0.47U	2	
C4035	ECHU1C104J	P.CAPACITOR 0.001U	1	
C4036	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4037	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C4038	ECST1CC106Z	T.CAPACITOR 16V	1	
C4039	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C4040	ECHU1C223JA	P.CAPACITOR 0.022U	1	
C4041	ECHU1C182JA	P.CAPACITOR 0.18U	1	
C4042	ECHU1C153JA	P.CAPACITOR 0.015U	1	
C4043	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4044	ECEV1EV330	E.CAPACITOR 25V 33U	1	
C4045	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4046	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C4047,48	ECHU1C183JA	P.CAPACITOR 0.018U	2	
C4049	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C4050	ECHU1C104J	P.CAPACITOR 0.001U	1	
C4051	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C4052	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4053	ECST1CC106Z	T.CAPACITOR 16V	1	
C4054	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4055	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C4056	ECHU1C103JA	P.CAPACITOR 0.01U	1	
C4057	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C4058	ECHU1C223JA	P.CAPACITOR 0.022U	1	
C4059	ECHU1C182JA	P.CAPACITOR 0.18U	1	
C4060	ECHU1C153JA	P.CAPACITOR 0.015U	1	
C4061	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4062-67	ECST1CC106Z	T.CAPACITOR 16V	6	
C4068	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4069	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C4070	ECEV1HNR47Q	E.CAPACITOR 50V 0.47U	1	
C4071	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C4072	ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C4073	ECQB1H682JF	P.CAPACITOR 50V 6800P	1	
C4074	ECQF6182KZ	P.CAPACITOR	1	
C4075,76	ECCD2H151J	C.CAPACITOR 500V 150P	2	
C4077-80	ECQB1H473JF	P.CAPACITOR 50V 0.047U	4	
C4081	ECHU1C103JA	P.CAPACITOR 0.01U	1	
C4082	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4083	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4084,85	ECST1CC106Z	T.CAPACITOR 16V	2	
C4086	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4087,88	ECEV1CV100	E.CAPACITOR 16V 10U	2	
C4089,90	ECEV1EV4R7	E.CAPACITOR 25V 4.7U	2	
C4501-03	ECUX1H103ZFV	C.CAPACITOR 50V	3	
C4504	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4505	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4506	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4507	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4508,09	ECST1CC106Z	T.CAPACITOR 16V	2	
C4510	ECEV1CV220	E.CAPACITOR 16V 22U	1	
C4511	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4512	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C4513	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4515,16	ECEV1HV010	E.CAPACITOR 50V 1U	2	
C4517	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C4518	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C4519	ECQB1H823JF	P.CAPACITOR 50V 0.082U	1	
C4520	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4521	ECEV1EV330	E.CAPACITOR 25V 33U	1	
C4522	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4523	ECST1CC106Z	T.CAPACITOR 16V	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4524	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4525-27	ECST1CC106Z	T.CAPACITOR 16V	3	
C4528	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4529	ECST1CC106Z	T.CAPACITOR 16V	1	
C4530	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4531,32	ECEV1CV100	E.CAPACITOR 16V 10U	2	
C4533,34	ECUX1C104ZFV	C.CAPACITOR 16V	2	
C4535	ECST1CC106Z	T.CAPACITOR 16V	1	
C4536-38	ECEV1CV100	E.CAPACITOR 16V 10U	3	
C4539	ECST1CC106Z	T.CAPACITOR 16V	1	
C4540	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C4541	ECUX1H103ZFV	C.CAPACITOR 50V	1	
C4543	ECEV1CV470	E.CAPACITOR 16V 47U	1	
D401	MA720	DIODE	1	<R>
D4001	MA3056-M	DIODE	1	<R>
D4002	MA151K	DIODE	1	<R>
D4005,06	MA151K	DIODE	2	<R>
D4007	MA151WK	DIODE	1	<R>
D4008	MA151WA	DIODE	1	<R>
D4009,10	MA151K	DIODE	2	<R>
D4501	MA153	DIODE	1	<R>
FL4001,02	VLF0402	FILTER	2	
FL4501	VLF0697	FILTER	1	
IC401	BA7705K1	IC	1	<R>
IC4001	M52055FP	IC	1	<R>
IC4002,03	LA7296	IC	2	<R>
IC4006	NJM4558M	IC	1	<R>
IC4501	MC14053BF	IC	1	<R>
IC4502,03	NJM4558M	IC	2	<R>
IC4504	UPC78N05H	IC	1	<R>
IC4505	VEP04353B	P.C.BOARD W/COMPONENT	1	<R>
IC4506	AN3912	IC	1	<R>
IC4507	MC14053BF	IC	1	<R>
IC4508	NJM4558M	IC	1	<R>
IC4509	NJM4565MD	IC	1	<R>
IC4510	BA6138	IC	1	<R>
IC4511	MC14066BF	IC	1	<R>
L401	VLQ0163J101	COIL 100UH	1	
L403	VLQ0163J101	COIL 100UH	1	
L4001	VLQEL07F153J	COIL 15UH	1	
L4004	VLQEL07F153J	COIL 15UH	1	
L4007	VLQ24F102K25	COIL	1	
L4501	VLQ0163J101	COIL 100UH	1	
P1,P2	VJR0797	CONNECTOR	2	
P4001	VJP1230R	CONNECTOR (MALE)	1	
P4002	VJP1230T	CONNECTOR (MALE)	1	
P4003	VJP1231T	CONNECTOR (MALE)	1	
P4501	VJP3176B050	CONNECTOR (MALE)	1	
P4502	VJP3079	CONNECTOR (MALE)	1	
Q401,02	2SD1328-R	TRANSISTOR	2	<R>
Q4001	MSD602-R	TRANSISTOR	1	<R>
Q4007,08	MSD601-R	TRANSISTOR	2	<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q4009,10	2SB792-R	TRANSISTOR	2	<R>
Q4011	MSB710-R	TRANSISTOR	1	<R>
Q4012	2SD973A-R	TRANSISTOR	1	<R>
Q4013,14	2SB710A-R	TRANSISTOR	2	<R>
Q4015-18	2SD814-R	TRANSISTOR	4	<R>
Q4019-22	2SD1938	TRANSISTOR	4	<R>
Q4501	MSB710-R	TRANSISTOR	1	<R>
Q4502	MSB709-R	TRANSISTOR	1	<R>
Q4503	MSD602-R	TRANSISTOR	1	<R>
Q4504,05	MSD601-R	TRANSISTOR	2	<R>
Q4506-10	2SD1328-R	TRANSISTOR	5	<R>
QR401	UN2113	TRANSISTOR-RESISTOR	1	<R>
QR403	UN2213	TRANSISTOR-RESISTOR	1	<R>
QR404	UN2113	TRANSISTOR-RESISTOR	1	<R>
QR4001,02	UN5113	TRANSISTOR-RESISTOR	2	<R>
QR4003	UN5211	TRANSISTOR-RESISTOR	1	<R>
QR4004	UN5113	TRANSISTOR-RESISTOR	1	<R>
QR4005	UN5211	TRANSISTOR-RESISTOR	1	<R>
QR4006	UN5113	TRANSISTOR-RESISTOR	1	<R>
QR4015	UN5213	TRANSISTOR-RESISTOR	1	<R>
QR4016	UN5215	TRANSISTOR-RESISTOR	1	<R>
QR4017,18	UN5213	TRANSISTOR-RESISTOR	2	<R>
QR4019	UN5215	TRANSISTOR-RESISTOR	1	<R>
QR4020	UN5213	TRANSISTOR-RESISTOR	1	<R>
QR4021-24	UN5215	TRANSISTOR-RESISTOR	4	<R>
QR4025	MRN1402	TRANSISTOR-RESISTOR	1	<R>
QR4026,27	MRN1403	TRANSISTOR-RESISTOR	2	<R>
QR4028,29	UN5113	TRANSISTOR-RESISTOR	2	<R>
QR4030	UN5212	TRANSISTOR-RESISTOR	1	<R>
QR4031,32	UN5213	TRANSISTOR-RESISTOR	2	<R>
QR4501	UN5213	TRANSISTOR-RESISTOR	1	<R>
QR4502	UN5212	TRANSISTOR-RESISTOR	1	<R>
QR4503	UN5211	TRANSISTOR-RESISTOR	1	<R>
QR4504	XN1501	TRANSISTOR-RESISTOR	1	<R>
QR4505,06	UN5213	TRANSISTOR-RESISTOR	2	<R>
		RESISTORS		
R403,04	ERJ6GEYG821	M.RESISTOR CH1/16W 820	2	
R406	ERJ6GEYG681	M.RESISTOR CH1/16W 680	1	
R407	ERJ6GEYJ112	M.RESISTOR CH1/16W 1.1K	1	
R408	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R409	ERJ6GEYG183	M.RESISTOR CH1/16W 18K	1	
R410	ERJ6GEYG562	M.RESISTOR CH1/16W 5.6K	1	
R411	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R412	ERJ6GEYJ303	M.RESISTOR CH1/16W 30K	1	
R413	ERJ6GEYJ822	M.RESISTOR CH1/16W 8.2K	1	
R414	ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1	
R415	ERJ6GEYG163	M.RESISTOR CH1/16W 16K	1	
R416	ERJ6GEYJ393	M.RESISTOR CH1/16W 39K	1	
R417	ERJ6GEYJ113	M.RESISTOR CH1/16W 11K	1	
R418	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R420	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R421	ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1	
R422	ERJ6GEYJ303	M.RESISTOR CH1/16W 30K	1	
R423	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R424	ERJ6GEYG562	M.RESISTOR CH1/16W 5.6K	1	
R425	ERJ6GEYG183	M.RESISTOR CH1/16W 18K	1	
R426	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R427	ERJ6GEYJ112	M.RESISTOR CH1/16W 1.1K	1	
R428	ERJ6GEYG681	M.RESISTOR CH1/16W 680	1	
R429	ERJ6GEYG821	M.RESISTOR CH1/16W 820	1	
R431	ERJ6GEYG821	M.RESISTOR CH1/16W 820	1	
R433	ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R434	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R435	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R436	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R437	ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R438	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R439	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R440	ERJ6GEYJ225	M.RESISTOR CH1/16W 2.2M	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R441	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R442,43	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	2	
R4001-03	ERJ3GEYJ104	M.RESISTOR CH 3W 100K	3	
R4004	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R4005	ERJ3GEYJ821	M.RESISTOR CH 3W 820	1	
R4006,07	ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	2	
R4008,09	ERJ3GEYG123	M.RESISTOR CH 3W 12K	2	
R4019,20	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R4051	ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R4052	VRE0034E123	M.RESISTOR CH 1/10W 12K	1	
R4053	ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R4054	ERJ3GEYJ181	M.RESISTOR CH 3W 180	1	
R4055	ERJ3GEYG222	M.RESISTOR CH 3W 2.2K	1	
R4056,57	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R4058	ERJ3GEYJ564	M.RESISTOR CH 3W 560K	1	
R4059	ERJ3GEYG331	M.RESISTOR CH 3W 330	1	
R4060	ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R4061	ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R4062	ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R4063	ERJ3GEYJ121	M.RESISTOR CH 3W 120	1	
R4064	ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R4065	VRE0034E123	M.RESISTOR CH 1/10W 12K	1	
R4066	ERJ3GEYJ101	M.RESISTOR CH 3W 100	1	
R4067	ERJ3GEYJ181	M.RESISTOR CH 3W 180	1	
R4068	ERJ3GEYG222	M.RESISTOR CH 3W 2.2K	1	
R4069,70	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R4071	ERJ3GEYJ564	M.RESISTOR CH 3W 560K	1	
R4072	ERJ3GEYG331	M.RESISTOR CH 3W 330	1	
R4073	ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R4074	ERJ3GEYJ334	M.RESISTOR CH 3W 330K	1	
R4075	ERJ3GEYJ121	M.RESISTOR CH 3W 120	1	
R4076	ERJ3GEYJ683	M.RESISTOR CH 3W 68K	1	
R4077	ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R4078	ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R4079	ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R4080	ERJ3GEYJ513	M.RESISTOR CH 3W 51K	1	
R4081	ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R4082	ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R4083	ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R4084	ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R4085	ERJ3GEYJ105	M.RESISTOR CH 3W 1M	1	
R4086	ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	1	
R4087	ERJ3GEYJ513	M.RESISTOR CH 3W 51K	1	
R4088	ERJ3GEYJ153	M.RESISTOR CH 3W 15K	1	
R4089	ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R4090	ERJ3GEYJ183	M.RESISTOR CH 3W 18K	1	
R4091	ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R4092	ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	1	
R4094-00	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	7	
R4101	ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R4102	ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R4103	ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R4104	ERDS2TJ4R7	C.RESISTOR 1/4W 4.7	1	
R4105	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R4106	ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1	
R4107	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R4108	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R4109	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R4110	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R4111	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R4112	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R4113	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R4114	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R4115	ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R4116	ERJ6GEYJ105	M.RESISTOR CH1/16W 1M	1	
R4117-20	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	4	
R4121	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R4122	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4124	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R4125	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4127,28	ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	2	
R4130-34	ERJ3GEYJ103	M.RESISTOR CH 3W 10K	5	
R4135	ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	
R4136	ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R4137	ERJ3GEYJ392	M.RESISTOR CH 3W 3.9K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4138		ERJ3GEYJ472	M.RESISTOR CH 3W 4.7K	1	
R4139,40		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	2	
R4141,42		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	2	
R4501		ERJ3GEYG512	M.RESISTOR CH 3W 5.1K	1	
R4502		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R4503		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R4504		ERJ3GEYG512	M.RESISTOR CH 3W 5.1K	1	
R4505-07		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3	
R4509		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R4510		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R4511,12		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	2	
R4513		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R4514		ERJ3GEYJ332	M.RESISTOR CH 3W 3.3K	1	
R4515		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R4516		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R4517		ERJ3GEYJ104	M.RESISTOR CH 3W 100K	1	
R4518		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R4519,20		ERJ3GEYJ682	M.RESISTOR CH 3W 6.8K	2	
R4521		ERJ3GEYJ822	M.RESISTOR CH 3W 8.2K	1	
R4522		ERJ3GEYJ222	M.RESISTOR CH 3W 2.2K	1	
R4523		ERJ3GEYJ333	M.RESISTOR CH 3W 33K	1	
R4524,25		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	2	
R4526		ERJ3GEYJ681	M.RESISTOR CH 3W 680	1	
R4527		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R4528		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R4529,30		ERJ3GEYJ152	M.RESISTOR CH 3W 1.5K	2	
R4531		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R4532		ERJ3GEYJ821	M.RESISTOR CH 3W 820	1	
R4533		ERJ3GEYJ182	M.RESISTOR CH 3W 1.8K	1	
R4534		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	1	
R4535		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R4536,37		ERJ3GEYJ562	M.RESISTOR CH 3W 5.6K	2	
R4539		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R4540		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R4541		ERJ3GEYJ223	M.RESISTOR CH 3W 22K	1	
R4542		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R4543		ERJ3GEYJ330	M.RESISTOR CH 3W 33	1	
R4544		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R4545		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R4546		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R4547		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R4548		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R4549		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	1	
R4550		ERJ3GEYJ563	M.RESISTOR CH 3W 56K	1	
R4551		ERJ3GEYJ561	M.RESISTOR CH 3W 560	1	
R4552-54		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	3	
R4555-58		ERJ3GEYJ473	M.RESISTOR CH 3W 47K	4	
R4559-62		ERJ3GEYJ103	M.RESISTOR CH 3W 10K	4	
R4563,64		ERJ3GEYJ470	M.RESISTOR CH 3W 47	2	
R4566		ERJ3GEYJ102	M.RESISTOR CH 3W 1K	1	
R4567		ERJ3GEYJ181	M.RESISTOR CH 3W 180	1	
RY4001		VSY2067	RELAY	1	
T4001		VLT0538	TRANSFORMER	1	
VR401		EVM7JGA00B24	V.RESISTOR 20K	1	
VR402		EVM7JGA00B14	V.RESISTOR	1	
VR403		EVM7JGA00B54	V.RESISTOR 50K	1	
VR405		EVM7JGA00B14	V.RESISTOR	1	
VR406		EVM7JGA00B54	V.RESISTOR 50K	1	
VR407		EVM7JGA00B24	V.RESISTOR 20K	1	
VR4001		EVM7DGA00B24	V.RESISTOR 20K	1	
VR4002		EVM7DGA00B14	V.RESISTOR 10K	1	
VR4003		EVM7DGA00B24	V.RESISTOR 20K	1	
VR4004-06		EVM7DGA00B14	V.RESISTOR 10K	3	
VR4007,08		EVN32CA00B25	V.RESISTOR 200K	2	
VR4501,02		EVM7DGA00B23	V.RESISTOR 2K	2	
VR4503		EVM7DGA00B14	V.RESISTOR 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
VR4504		EVM7DGA00B24	V.RESISTOR 20K	1	
VR4505,06		EVM7JGA00B53	V.RESISTOR	2	
VR4507		EVM7DGA00B25	V.RESISTOR 200K	1	
			MISCELLANEOUS		
		VSC4001	SHIELD CASE (TOP)	1	
		VSC4002	SHIELD CASE (MAIN)	1	
		VSC4003	SHIELD CASE (BOTTOM)	1	
==========		VEP05162I	P.C.BOARD W/COMPONENT		
			HEAD AMP		
			CAPACITORS		
C5001		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5002,03		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5004		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C5005		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5006-08		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C5009		ECUM1H182JN	C.CAPACITOR CH 50V 1800P	1	
C5010		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5011		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C5012		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C5013		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5014		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C5015		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5016		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C5017		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C5018,19		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	2	
C5020		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C5021		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C5022		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C5023		ECUM1H020DCN	C.CAPACITOR CH 50V 2P	1	
C5024,25		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5026		ECUM1H020DCN	C.CAPACITOR CH 50V 2P	1	
C5027		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C5028		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5030		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C5031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5032,33		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5034		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5035		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C5036		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C5037,38		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C5039,40		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5042		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C5043		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C5044,45		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C5046		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C5047		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C5048		ECUM1H472ZFN	C.CAPACITOR CH 50V 4700P	1	
C5056,57		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5058		VCYE1C104MR1	S.CAPACITOR 16V 0.1U	1	
C5059		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C5060		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C5061		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C5062		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C5063		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C5066		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
D5001,02		MA151K	DIODE	2	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D5004		MA151K	DIODE	1	<R>
IC5001		AN3334K	IC	1	<R>
IC5002		BA7740FS	IC	1	<R>
IC5003		AN3370K	IC	1	<R>
L5001-04		VLQ0460	COIL	4	
L5007		VLQ0460	COIL	1	
L5008		VLQ0188J5R6	COIL 5.6UH	1	
P5001		VJP3091	CONNECTOR (MALE)	1	
P5002		VJS2603	CONNECTOR (FEMALE)	1	
P5003		VJP3091	CONNECTOR (MALE)	1	
Q5001		MSB709-R	TRANSISTOR	1	<R>
Q5002		MSC2295-B	TRANSISTOR	1	<R>
Q5003		XN4504	TRANSISTOR	1	<R>
Q5004,05		MSC2295-B	TRANSISTOR	2	<R>
QR5001		MRN1404	TRANSISTOR-RESISTOR	1	<R>
			RESISTORS		
R5001		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R5003		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R5004		ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1	
R5005		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R5006		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R5007		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R5008		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R5009		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R5010		ERJ6GEYK1R0	M.RESISTOR CH1/16W 1.0	1	
R5011-14		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	4	
R5015-18		ERJ6GEYJ100	M.RESISTOR CH1/16W 10	4	
R5019		ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	
R5020,21		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	2	
R5022		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R5026		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R5027		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R5028		ERJ6GEYG243	M.RESISTOR CH1/16W 24K	1	
R5029		ERJ6GEYG273	M.RESISTOR CH1/16W 27K	1	
R5030		ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	
R5031		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R5032		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R5033		ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1	
R5034		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R5036		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R5037,38		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	2	
R5039		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R5040		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R5041		ERJ6GEYJ180	M.RESISTOR CH1/16W 18	1	
R5042,43		ERJ6GEYJ100	M.RESISTOR CH1/16W 10	2	
R5044,45		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R5046,47		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R5056		VRE0034E182	M.RESISTOR CH 1/10W 1.8K	1	
R5057		VRE0034E332	M.RESISTOR CH 1/10W 3.3K	1	
R5058		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R5059		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R5070		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
VR5001,02		EVN32CA00B23	V.RESISTOR 2K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VSC3119	SHIELD CASE (MAIN)	1	
		VSC3039	SHIELD CASE (TOP)	1	
		VSC3040	SHIELD CASE (BOTTOM)	1	
		VJF0215	BINDER	1	
==========		VEP06920B	P.C.BOARD W/COMPONENT		
			SYSCON & SERVO		
			CAPACITORS		
C2001		ECEA0JU102	E.CAPACITOR 6.3V 1000U	1	
C2002		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2005		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2006		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C2007		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2008		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C2009		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C2013		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C2016		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C2019		ECQB1H472JF	P.CAPACITOR 50V 4700P	1	
C2021		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C2022		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2023		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2024		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C2025		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2026		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C2027		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C2028		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2029,30		ECEA1EKN3R3	E.CAPACITOR 25V 3.3U	2	
C2031		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C2032		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2034		ECQB1H683JF	P.CAPACITOR 50V 0.068U	1	
C2035		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2037		ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C2038		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2039,40		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
C2041		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2042-56		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	15	
C2065		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2067		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2069		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C2070		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2071		ECEA1ASS332	E.CAPACITOR 10V 3300U	1	
C2072		ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C2075		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C2076		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2301		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2303-06		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	4	
C2307		ECQB1H683JF	P.CAPACITOR 50V 0.068U	1	
C2308,09		ECEA1HKN4R7	E.CAPACITOR 50V 4.7U	2	
C2310		ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C2311		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2312		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2313		ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2314		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2315		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C2316		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2318,19		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	2	
C2320-23		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2324	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2325	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C2326,27	ECEA0JKA470	E.CAPACITOR 6.3V 47U	2	
C2328	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C2329,30	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C2333	ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C2336	ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C2337,38	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C2339	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2340	ECEA1HKN4R7	E.CAPACITOR 50V 4.7U	1	
C2343,44	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2501	ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C2502	ECQB1H222JF	P.CAPACITOR 50V 2200P	1	
C2503	ECQB1H273JF	P.CAPACITOR 50V 0.027U	1	
C2504	ECQB1H222JF	P.CAPACITOR 50V 2200P	1	
C2510	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C2512-14	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C2516-19	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C2901	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C2902	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C2903	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C2904	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C2905	ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C2906	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C2907	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2908	ECQB1H222JF	P.CAPACITOR 50V 2200P	1	
C2909	ECEA1EU221	E.CAPACITOR 25V 220U	1	
C2910	ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C2911	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2912	ECEA1EU221	E.CAPACITOR 25V 220U	1	
C2913	ECEA1HU4R7	E.CAPACITOR 50V 4.7U	1	
C2914	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2915	ECEA1EU221	E.CAPACITOR 25V 220U	1	
C2916,17	ECEA1EU101	E.CAPACITOR 25V 100U	2	
C2918	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C2919	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2920	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2921	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C2922	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C2923	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2925	ECEA1EU101	E.CAPACITOR 25V 100U	1	
C2926	ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C6001	ECEA1EU4R7	E.CAPACITOR 25V 4.7U	1	
C6002	ECQB1H104JF	P.CAPACITOR 50V 0.1U	1	
C6003,04	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6005,06	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6007,08	ECEA1ASS332	E.CAPACITOR 10V 3300U	2	
C6009	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6010	ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C6011	ECEA1CU222	E.CAPACITOR 16V 2200U	1	
C6012	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C6013	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C6014	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6015	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C6016	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6017	ECQB1H472JF	P.CAPACITOR 50V 4700P	1	
C6018	ECQB1H333JF	P.CAPACITOR 50V 0.033U	1	
C6019	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C6020	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6021	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6022	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6023	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6024-27	ECQB1H102JF	P.CAPACITOR 50V 1000P	4	
C6028	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C6029,30	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C6031	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6032	ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6033,34	ECQB1H104JF	P.CAPACITOR 50V 0.1U	2	
C6035	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C6036	ECEA1CN101	E.CAPACITOR 16V 100U	1	
C6037	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C6038,39	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C6040	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6041	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C6042	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6043,44	ECUM1H221KBN	C.CAPACITOR CH 50V 220P	2	
C6045	ECUM1H271KBN	C.CAPACITOR CH 50V 270P	1	
C6046,47	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6048	ECEA1EU470	E.CAPACITOR 25V 47U	1	
C6049	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6050	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C6051	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6052	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
D2001	MA151WK	DIODE	1	<R>
D2003,04	11EQS04	DIODE	2	<R>
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D2306	MA4062M	DIODE	1	<R>
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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IC6002		LM393PS	IC	1	<R>
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J6004		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
L2001-05		VLQEL05S101J	COIL 100UH	5	
L2006		VLQ0129	COIL	1	
L2009-16		VLQ0163J221	COIL 220UH	8	
L2018		VLQ0163J221	COIL 220UH	1	
L2301,02		VLQEL05S101J	COIL 100UH	2	
L2304		VLQEL05S101J	COIL 100UH	1	
L2502		VLQEL05S101J	COIL 100UH	1	
L2901		VLQEL05S101J	COIL 100UH	1	
L2902		VLQ0128	COIL	1	
L2903-05		ELC10E014	COIL	3	
L6001		VLQEL05S101J	COIL 100UH	1	
L6002		VLQEL05S150J	COIL 15UH	1	
L6003		VLQEL05S471J	COIL 470UH	1	
L6004		VLQ0163J221	COIL 220UH	1	
P2001		VJP1230T	CONNECTOR (MALE)	1	
P2301		VJP3078	CONNECTOR (MALE)	1	
P2302		VJS1477	CONNECTOR (FEMALE)	1	
P2501		VJS3135	CONNECTOR (FEMALE)	1	
P2901		VJS2149W	CONNECTOR (FEMALE)	1	
P6001		VJS2149W	CONNECTOR (FEMALE)	1	
P6002		VJP3529	CONNECTOR (MALE)	1	
P6003		VJS1477	CONNECTOR (FEMALE)	1	
P6004		VJP1230T	CONNECTOR (MALE)	1	
P6005-07		VJS3202B020Z	CONNECTOR (FEMALE)	3	
P6008		VJP1230T	CONNECTOR (MALE)	1	
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Q2902,03		2SD601A	TRANSISTOR	2	<R>
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Q2909		2SB772-QRS	TRANSISTOR	1	
Q2910,11		MSB709-R	TRANSISTOR	2	<R>
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Q6015		2SD1273	TRANSISTOR	1	<R>
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Q6018		MSD601-R	TRANSISTOR	1	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR2001-08		MRN1404	TRANSISTOR-RESISTOR	8	<R>
QR2501-05		MRN1404	TRANSISTOR-RESISTOR	5	<R>
QR2901,02		MRN1404	TRANSISTOR-RESISTOR	2	<R>
QR2903,04		MRN2404	TRANSISTOR-RESISTOR	2	<R>
QR2905		MRN1404	TRANSISTOR-RESISTOR	1	<R>
QR6001		MRN2402	TRANSISTOR-RESISTOR	1	<R>
QR6002		MRN2404	TRANSISTOR-RESISTOR	1	<R>
QR6003		MRN1403	TRANSISTOR-RESISTOR	1	<R>
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QR6010		MRN2402	TRANSISTOR-RESISTOR	1	<R>
QR6011-15		MRN1404	TRANSISTOR-RESISTOR	5	<R>
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R2001		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2002		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2003		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R2004		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R2008,09		ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	2	
R2014		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R2015		ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R2016		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R2017		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2018,19		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R2020		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R2022		ERJ6GEYJ221	M.RESISTOR CH1/16W 220	1	
R2023		ERJ6GEYG622	M.RESISTOR CH1/16W 6.2K	1	
R2025		ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
R2026		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2027		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R2030,31		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2032		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R2039		ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1	
R2041		ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1	
R2043,44		ERJ6GEYJ101	M.RESISTOR CH1/16W 100	2	
R2045-47		ERJ6GEYG223	M.RESISTOR CH1/16W 22K	3	
R2048		ERJ6GEYG333	M.RESISTOR CH1/16W 33K	1	
R2049		ERJ6GEYG224	M.RESISTOR CH1/16W 220K	1	
R2050		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2051,52		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	2	
R2053		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2054		ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	1	
R2058,59		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2060,61		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R2070		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R2072,73		ERJ6GEYG223	M.RESISTOR CH1/16W 22K	2	
R2074		ERJ6GEYJ563	M.RESISTOR CH1/16W 56K	1	
R2075		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R2076		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R2080,81		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2083		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2301		ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R2302		ERX12SJR68	M.RESISTOR 1/2W 0.68	1	
R2303,04		ERDS2TJ150	C.RESISTOR 1/4W 15	2	
R2305		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2306		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R2307,08		ERJ6GEYJ273	M.RESISTOR CH1/16W 27K	2	
R2309		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R2310		ERJ6GEYG242	M.RESISTOR CH1/16W 2.4K	1	
R2311		ERJ6GEYJ684	M.RESISTOR CH1/16W 680K	1	
R2312		ERJ6GEYG273	M.RESISTOR CH1/16W 27K	1	
R2313		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2314		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2315		ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2316		ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
R2317		ERDS2TJ330	C.RESISTOR 1/4W 33	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2318		ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
R2321		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2323		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2324		ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
R2325-28		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	4	
R2329,30		ERJ6GEYJ184	M.RESISTOR CH1/16W 180K	2	
R2331		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R2334		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R2335		ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
R2340,41		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R2501		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R2502		ERJ6GEYJ334	M.RESISTOR CH1/16W 330K	1	
R2503		ERJ6GEYJ274	M.RESISTOR CH1/16W 270K	1	
R2504		ERJ6GEYJ123	M.RESISTOR CH1/16W 12K	1	
R2505		ERJ6GEYJ334	M.RESISTOR CH1/16W 330K	1	
R2506		ERJ6GEYJ154	M.RESISTOR CH1/16W 150K	1	
R2507-10		ERJ6GEYG104	M.RESISTOR CH1/16W 100K	4	
R2511-15		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	5	
R2516		ERJ6GEYG393	M.RESISTOR CH1/16W 39K	1	
R2517		ERJ6GEYG223	M.RESISTOR CH1/16W 22K	1	
R2518		ERJ6GEYF124	M.RESISTOR CH1/16W 120K	1	
R2519,20		ERJ6GEYG124	M.RESISTOR CH1/16W 120K	2	
R2521		ERJ6GEYG154	M.RESISTOR CH1/16W 150K	1	
R2522		ERJ6GEYG104	M.RESISTOR CH1/16W 100K	1	
R2523,24		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R2525		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R2526		ERJ6GEYJ823	M.RESISTOR CH1/16W 82K	1	
R2901		ERJ6GEYJ563	M.RESISTOR CH1/16W 56K	1	
R2902		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2903		ERJ6GEYJ154	M.RESISTOR CH1/16W 150K	1	
R2904		ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R2905,06		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2907		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R2908		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R2909-12		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	4	
R2913		ERDS2TJ270	C.RESISTOR 1/4W 27	1	
R2914		ERG2SJ561	M.RESISTOR 2W 560	1	
R2915		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R2916		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R2917-19		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	3	
R2920		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R2921		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R2922		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R2923		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R2924		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R2925		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R2926-28		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	3	
R2929		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R2930		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R2931		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R2932		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R2933		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2934,35		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2936		ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R2937		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2939		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2940		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R2941		ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R2942-44		ERJ6GEYJ271	M.RESISTOR CH1/16W 270	3	
R2945,46		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R2947		ERJ6GEYJ101	M.RESISTOR CH1/16W 100	1	
R2949-51		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	3	
R2952		ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	1	
R2953		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R2954		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R6001,02		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	2	
R6003		ERJ6GEYG181	M.RESISTOR CH1/16W 180	1	
R6004		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R6005,06		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6007		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R6008		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R6009		ERJ6GEYJ474	M.RESISTOR CH1/16W 470K	1	
R6010		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R6011		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R6012		ERJ6GEYJ121	M.RESISTOR CH1/16W 120	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6013		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R6014		ERD2FCG220	C.RESISTOR 2W 22	1	
R6015		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R6016		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R6017		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R6018,19		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6020		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R6021		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R6022		ERJ6GEYJ183	M.RESISTOR CH1/16W 18K	1	
R6023		ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6024-27		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	4	
R6028		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R6029		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R6030		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R6031		ERJ6GEYG102	M.RESISTOR CH1/16W 1K	1	
R6032		ERJ6GEYG302	M.RESISTOR CH1/16W 3K	1	
R6033		ERJ6GEYG102	M.RESISTOR CH1/16W 1K	1	
R6034,35		ERJ6GEYG103	M.RESISTOR CH1/16W 10K	2	
R6036-39		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	4	
R6040,41		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	2	
R6042		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R6043		ERJ6GEYJ392	M.RESISTOR CH1/16W 3.9K	1	
R6044		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R6045		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R6046-50		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	5	
R6051		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R6052-59		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	8	
R6060-65		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	6	
R6066		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R6067,68		ERJ6GEYJ821	M.RESISTOR CH1/16W 820	2	
R6069		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R6070		ERJ6GEYG181	M.RESISTOR CH1/16W 180	1	
R6071		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R6072		ERJ6GEYJ562	M.RESISTOR CH1/16W 5.6K	1	
R6073		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R6074		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R6075		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R6076		ERJ6GEYJ683	M.RESISTOR CH1/16W 68K	1	
R6077,78		ERG1SJ300	M.RESISTOR 1W 30	2	
R6079		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R6080		ERJ6GEYJ682	M.RESISTOR CH1/16W 6.8K	1	
R6081		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R6082		ERJ6GEYJ222	M.RESISTOR CH1/16W 2.2K	1	
R6083		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R6084-87		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	4	
R6088		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
T6001		EIQ7QF002B	TRANSFORMER	1	
VR2001		EVN49CA00B23	V.RESISTOR 2K	1	
VR2002		EVN49CA00B15	V.RESISTOR 100K	1	
VR2004		EVN49CA00B25	V.RESISTOR 200K	1	
VR2005,06		EVN49CA00B15	V.RESISTOR 100K	2	
X2001		VSX0296	CRYSTAL OSCILLATOR	1	<R>
X2901		VSX0136	CRYSTAL OSCILLATOR	1	<R>
X6001		VSX0230	CRYSTAL OSCILLATOR	1	<R>
			MISCELLANEOUS		
		VJF0304	CLIP	2	
		VMC0075	HEAT SINK SPRING	1	
		VMC0493	HEAT SINK SPRING	1	
		VSC1215	IC HEAT SINK	1	
		VSC3405	HEAT SINK (A)	1	
		VWJ04CN280CC	FLEXIBLE CABLE	2	
		VWJ0753	FLEXIBLE CABLE	1	
		VMX0985	SPACER	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
**********	VEP06921B	P.C.BOARD W/COMPONENT SYSCON & SERVO		
		CAPACITORS		
C6701,02	ECEA1AKS221	E.CAPACITOR 10V 220U	2	
C6703-05	ECEA1HKS220	E.CAPACITOR 50V 22U	3	
C6706	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6707	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6708,09	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6710	ECEA1CKS330	E.CAPACITOR 16V 33U	1	
C6711	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C6712	ECEA1CKS330	E.CAPACITOR 16V 33U	1	
C6713	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6714	ECEA1AKS221	E.CAPACITOR 10V 220U	1	
C6715	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6716,17	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	
C6718-20	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	3	
C6721	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C6722	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6723-25	ECEA1CKS470	E.CAPACITOR 16V 47U	3	
C6726	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6727,28	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6730	ECEA1AKS221	E.CAPACITOR 10V 220U	1	
D6702	MA4056-M	DIODE	1	<R>
D6703	MA701A	DIODE	1	<R>
D6704	MA3300-L	DIODE	1	
D6705,06	MA153	DIODE	2	<R>
D6707-10	MA152K	DIODE	4	<R>
D6711-22	MA151K	DIODE	12	<R>
D6724	MA151K	DIODE	1	<R>
D6727-35	MA151K	DIODE	9	<R>
D6738	MA701A	DIODE	1	<R>
D6739,40	MA151K	DIODE	2	<R>
D6741	MA153	DIODE	1	<R>
DP6701	VSL0313	DISPLAY TUBE	1	
FL6701	VLF0523	FILTER	1	
IC6701	UPD75236J029	IC	1	<R>
IC6702	MN1382-R	IC	1	<R>
IC6703	MN1382-U	IC	1	<R>
IC6704	UPC393G2	IC	1	<R>
IC6705	UPD6253GS	IC	1	<R>
IC6706	MC74HC4053F	IC	1	<R>
IC6707	NJM2068MD	IC	1	<R>
J6704	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
J6706	VJJ0379	JACK	1	
J6707	VJJ0380	JACK	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L6701	VLQEL05K121J	COIL 120UH	1	
L6702,03	VLQEL05K101J	COIL 100UH	2	
LD6701-04	LN440YCPUV	LED	4	
LD6705	LN41YCPHL	LED	1	
LD6706,07	LN440YCPUV	LED	2	
LD6709	LN41YCPHL	LED	1	
LD6710,11	LN340GCP	LED	2	
P6701	VJS2889A021	CONNECTOR (FEMALE)	1	
P6702	VJP3076	CONNECTOR (MALE)	1	
Q6701	2SB709A	TRANSISTOR	1	<R>
Q6702	MSD602-R	TRANSISTOR	1	<R>
Q6703-06	MSB710-R	TRANSISTOR	4	<R>
Q6707-10	MSD601-R	TRANSISTOR	4	<R>
Q6711	MSD602-R	TRANSISTOR	1	<R>
		RESISTORS		
R6701	ERJ14YJ152	M.RESISTOR 1/4W 1.5K	1	
R6702	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6703,04	ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	2	
R6705	ERJ6GEYJ564	M.RESISTOR CH1/16W 560K	1	
R6706	ERJ6GEYJ681	M.RESISTOR CH1/16W 680	1	
R6707,08	ERJ6GEYJ683	M.RESISTOR CH1/16W 68K	2	
R6709	ERJ6GEYJ564	M.RESISTOR CH1/16W 560K	1	
R6710,11	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6712-16	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	5	
R6717	ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R6718-29	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	12	
R6730-33	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	4	
R6734,35	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R6736	ERJ6GEYJ392	M.RESISTOR CH1/16W 3.9K	1	
R6737-49	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	13	
R6750	ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R6752-59	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	8	
R6760-67	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	8	
R6768-71	ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	4	
R6772,73	ERJ6GEYJ511	M.RESISTOR CH1/16W 510	2	
R6776-82	ERJ14YJ470	M.RESISTOR 1/4W 47K	7	
R6784-86	ERJ14YJ470	M.RESISTOR 1/4W 47K	3	
R6787	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6788	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R6789	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6790	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R6791	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6792	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R6793	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6794-98	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	5	
R6799	ERJ6GEYJ104	M.RESISTOR CH1/16W 100K	1	
R6800	ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R6801,02	ERJ6GEYJ224	M.RESISTOR CH1/16W 220K	2	
R6803	ERJ6GEYJ391	M.RESISTOR CH1/16W 390	1	
R6804	ERJ6GEYF124	M.RESISTOR CH1/16W 120K	1	
R6805	ERJ6GEYJ753	M.RESISTOR CH1/16W 75K	1	
R6806	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R6807	ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
R6809	ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R6810-12	ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	3	
R6813	ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R6814	ERJ6GEYJ2R2	M.RESISTOR CH1/16W 2.2	1	
SW6701-12	EVQQSB04B	SWITCH	12	<R>
SW6714	EVQQSB04B	SWITCH	1	<R>
SW6716,17	VSS0395	SWITCH	2	<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
SW6718,19	EVQQSB04B	SWITCH	2	<R>
SW6720	VSS0220	SWITCH	1	<R>
SW6721-23	VSS0395	SWITCH	3	<R>
VR6701,02	EVUF3AF15B24	V.RESISTOR 20K	2	
VR6703	EVJYB0F15C23	V.RESISTOR 2K	1	
X6701	VSX0140	CRYSTAL OSCILLATOR	1	<R>
		MISCELLANEOUS		
	VSQ0651	JOG/SHTL ENCORDER	1	
	VGU6510	LED HOLDER	2	
	VJF1088	DISPLAY HOLDER	1	
	VMP4258	FRONT MIC ANGLE	2	
	VMX1658	SPACER	4	
	XYE3+EF6	SCREW	1	
----------	VEP08164B	P.C.BOARD W/COMPONENT		
		VIDEO (3)		
		CAPACITORS		
C8001	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8002,03	ECEV0JV470	E.CAPACITOR 6.3V 47U	2	
C8004	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C8005	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8006	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C8007	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C8008	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8009	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C8010	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C8011	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8012	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C8013	ECEV1HV010	E.CAPACITOR 50V 1U	1	
C8014	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8015	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C8017	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8018	ECEV0JV101	E.CAPACITOR 6.3V 100U	1	
C8019-21	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C8023,24	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C8025	ECUM1H050DCN	C.CAPACITOR CH 50V 5P	1	
C8026	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8027	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C8028	ECEV1EV4R7	E.CAPACITOR 25V 4.7U	1	
C8029	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C8031,32	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C8033	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C8034	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8035	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C8036	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C8037	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C8038	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C8039	ECUM1H010CCN	C.CAPACITOR CH 50V 1P	1	
C8040	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C8041,42	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	
C8043	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C8044	ECUM1H010CCN	C.CAPACITOR CH 50V 1P	1	
C8045	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C8046	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C8047	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C8048	ECEV0JV470	E.CAPACITOR 6.3V 47U	1	
C8049	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8050	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C8051	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8052	ECEV1CV100	E.CAPACITOR 16V 10U	1	
C8053,54	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	2	
C8056	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8057	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C8058-60	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C8073,74	ECUM1C334KBM	C.CAPACITOR CH 16V 0.33U	2	
C8093	ECEV1CV470	E.CAPACITOR 16V 47U	1	
C8094	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8096-99	ECEV0JV470	E.CAPACITOR 6.3V 47U	4	
C8100	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8101	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C8102	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
D8001	MA151K	DIODE	1	<R>
D8002	MA151WK	DIODE	1	<R>
D8003	11EQS04	DIODE	1	<R>
FL8001	VLF0523	FILTER	1	
FL8002	ELB4R053	FILTER	1	
IC8001	NJM2233BMA	IC	1	<R>
IC8002	UPC2405HF	IC	1	<R>
IC8004	TC7WU04F	IC	1	<R>
IC8005	MC74HC541F	IC	1	<R>
IC8006	HM63021FP	IC	1	<R>
IC8010	MST003MS	IC	1	<R>
IC8011	MC141625AFU	IC	1	<R>
IC8013	HM63021FP	IC	1	<R>
L8001-03	VLQ0163J470	COIL 47UH	3	
L8004	VLQ0163J180	COIL 18UH	1	
L8005	VLQ0163J220	COIL 22UH	1	
L8006	VLQ0163J150	COIL 15UH	1	
L8007	VLQ0163J180	COIL 18UH	1	
L8008	VLQ0163J220	COIL 22UH	1	
L8009	VLQ0163J150	COIL 15UH	1	
L8010-12	VLQ0163J470	COIL 47UH	3	
L8014,15	VLQ0163J220	COIL 22UH	2	
P8001	VJP3176B050	CONNECTOR (MALE)	1	
Q8001	MSC2295-B	TRANSISTOR	1	<R>
Q8002	2SA1022-B	TRANSISTOR	1	<R>
Q8003	MSD601-R	TRANSISTOR	1	<R>
Q8004	MSC2295-B	TRANSISTOR	1	<R>
Q8005	2SA1022-B	TRANSISTOR	1	<R>
Q8006	MSD601-R	TRANSISTOR	1	<R>
Q8007	MSC2295-B	TRANSISTOR	1	<R>
Q8008,09	MSB709-R	TRANSISTOR	2	<R>
Q8010	MSD601-R	TRANSISTOR	1	<R>
Q8018,19	MSC2295-B	TRANSISTOR	2	<R>
Q8020	MSD601-R	TRANSISTOR	1	<R>
QR8002-06	MRN1404	TRANSISTOR-RESISTOR	5	<R>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R8001		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R8002		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R8003		ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R8004		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R8005		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8006		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R8007		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R8008		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R8009		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R8010		ERJ6GEYJ561	M.RESISTOR CH1/16W 560	1	
R8011		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8012,13		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	2	
R8014		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8015		ERJ6GEYJ330	M.RESISTOR CH1/16W 33	1	
R8016		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R8017		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R8018-25		ERJ6GEYG680	M.RESISTOR CH1/16W 68	8	
R8052		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R8053		ERJ6GEYJ471	M.RESISTOR CH1/16W 470	1	
R8054		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R8056		ERJ6GEYJ331	M.RESISTOR CH1/16W 330	1	
R8057		ERJ6GEYJ332	M.RESISTOR CH1/16W 3.3K	1	
R8058		ERJ6GEYJ272	M.RESISTOR CH1/16W 2.7K	1	
R8059		ERJ6GEYJ473	M.RESISTOR CH1/16W 47K	1	
R8060		ERJ6GEYG680	M.RESISTOR CH1/16W 68	1	
R8061		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8062		ERJ6GEYG680	M.RESISTOR CH1/16W 68	1	
R8063,64		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	2	
R8067		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R8068		ERJ6GEYJ754	M.RESISTOR CH1/16W 750K	1	
R8069		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8070		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	1	
R8071		ERJ6GEYJ103	M.RESISTOR CH1/16W 10K	1	
R8072		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8073,74		ERJ6GEYJ152	M.RESISTOR CH1/16W 1.5K	2	
R8075		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8096,97		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R8098		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R8099		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R8100		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8101		ERJ6GEYJ122	M.RESISTOR CH1/16W 1.2K	1	
R8102		ERJ6GEYJ223	M.RESISTOR CH1/16W 22K	1	
R8103		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R8104,05		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	2	
R8106		ERJ6GEYJ472	M.RESISTOR CH1/16W 4.7K	1	
R8107		ERJ6GEYJ182	M.RESISTOR CH1/16W 1.8K	1	
R8108		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8109		ERJ6GEYJ153	M.RESISTOR CH1/16W 15K	1	
R8110		ERJ6GEYJ333	M.RESISTOR CH1/16W 33K	1	
R8111		ERJ6GEYJ102	M.RESISTOR CH1/16W 1K	1	
R8112-27		ERJ6GEYG680	M.RESISTOR CH1/16W 68	16	
R8129		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R8131		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
VR8001,02		EVM7DGA00B23	V.RESISTOR 2K	2	
			MISCELLANEOUS		
		VSC4010	SHIELD CASE (TOP)	1	
		VSC4012	SHIELD CASE (BOTTOM)	1	
		VSC4011	SHIELD CASE (MAIN)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks

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Order No. VSD9605S207
D2, D4

Service Manual

Supplement

NTSC / PAL **Video Product**

Subject : Change of HEAD AMP C.B.A.

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830P	18	VSD9403M246	B5T
AG-MD830E	13	VSD9408M637	B5T
AG-7350-P	53	VSD9106M207	B5T
AG-7350RP	16	VSD9203M216	B5T
AG-7355-P	27	VSD9110M212	B5T
AG-7355RP	16	VSD9203M216	B5T
AG-7150-P	52	VSD9106M207	B5T
AG-7150-E/B	49	VSD9109M615	B5T
AG-7350-E/B	51	VSD9109M615	B5T
AG-7355-E/B	35	VSD9110M616	B5T
AG-6730P	35	VSD9206M222	B5T
AG-6730E	32	VSD9212M628	B5T
AG-6760P	24	VSD9210M227	B5T
AG-DS850P	77	VSD9403M244	B5T
AG-6045E	4	VSD9501M640	B5T

Board: HEAD AMP C.B.A.

The circuit board pattern has been changed for productivity, reliability and serviceability of the board.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
R5040	ERDS2TJ151	ERDS2TJ221	C.RESISTOR 1/4W 220	1	D	AG-MD830P/E, 7350-P/RP/E/B, AG-7355-P/RP/E/B, 6760P
R5062	----------------	ERDS2TJ221	C.RESISTOR 1/4W 220	1	D	AG-MD830P/E, 7350-P/RP/E/B, AG-7355-P/RP/E/B, 6760P
R5070	ERDS2TJ472	----------------		0	E	AG-MD830P/E
R5070	ERDS2TJ472	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	D	AG-7350-P/RP/E/B,7355-P/RP/E/B
R5070	----------------	ERJ6GEY0R00	M.RESISTOR CH 0	1	E	AG-6760P
R5041	ERJ6GEYJ180	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	D	AG-7350-P/RP/E/B,7355-P/RP/E/B AG-6760P, AG-DS850P
R5060	----------------	ERJ6GEY0R00	M.RESISTOR CH 0	1	E	AG-7350-P/RP/E/B,7355-P/RP/E/B AG-6730P/E, 6760P
R5061	ERJ6GEY0R00	----------------		0	E	AG-6760P
Q5006	2SD1450	----------------		0	E	AG-6760P, 6045E
IC5003	----------------	2SD1450	TRANSISTOR	1	E	AG-6760P, 6045E
C5057	----------------	ERJ6GEY0R00	M.RESISTOR CH 0	1	E	AG-6760P
C5060	----------------	ERJ6GEY0R00	M.RESISTOR CH 0	1	E	AG-6760P
W5001	ERJ6GEY0R00	----------------	M.RESISTOR CH 0	1	E	AG-6760P

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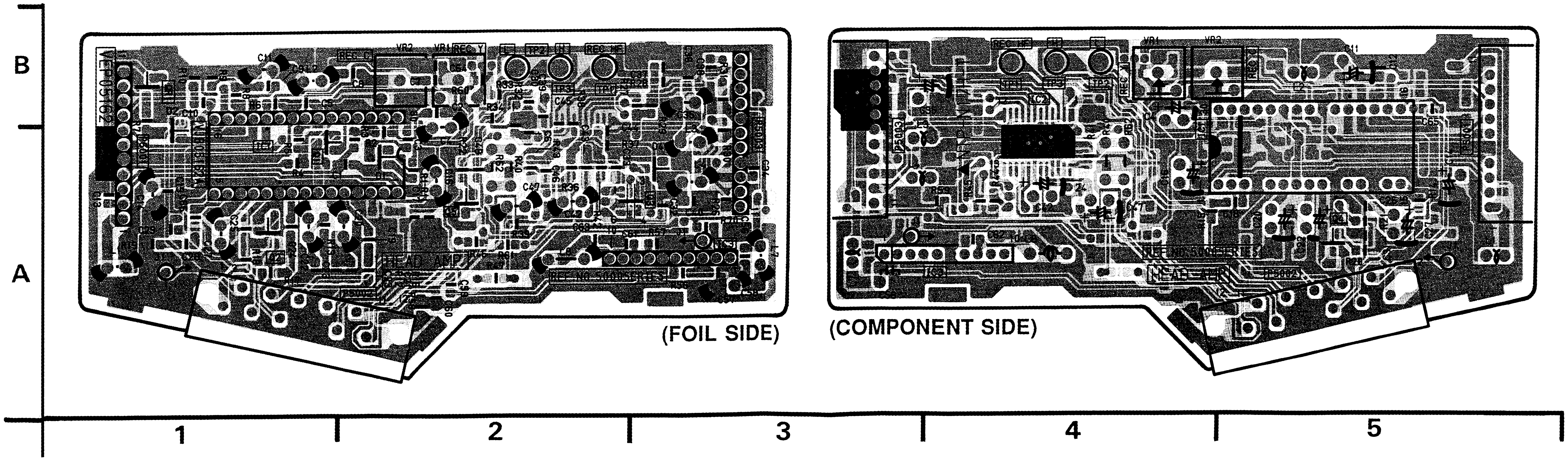
HEAD AMP C.B.A.

HEAD AMP C.B.A.	
Transistor	
Q5001	A-1
Q5002	A-1
Q5003	A-3
Q5004	A-5
Q5005	A-2
Transistor & Resistor	
QR5001	B-1
Integrated Circuit	
IC5001	A-1
IC5001	A-5
IC5002	A-4
IC5003	A-3
IC5003	A-4
Test Point	
TP5001	B-2
TP5001	B-4
TP5002	B-2
TP5002	B-4
TP5003	B-2
TP5003	B-4
Adjustment	
VR5001	B-2
VR5001	B-4
VR5002	B-2
VR5002	B-4
Connector	
P5001	A-1
P5001	A-5
P5002	A-2
P5002	A-5
P5003	A-3
P5003	A-3

ADDRESS INFORMATION


B
A
1
2
3
4
5
(FOIL SIDE)
(COMPONENT SIDE)
HEAD AMP
VR2
VR1
REC Y
REC HF
TP2
TP3

⚠WARNING
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Order No. VSD9501S602

Service Manual

Supplement

Video Product

Subject: Change of HIC

Please use this supplement together with the Service Manual as follows:

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830E	2	VSD9408M637	A5 - - -

Board : VIDEO (1)

Symptom : When a tape which has skew is played back, the APC circuit may not perform properly.

Remedy : The H-IC on the video 1 C.B.A. has been changed from VCR0380 to VCR0383.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.	B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.	D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Other		

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
IC3801	VCR0380	VCR0383	IC	1	C	

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Order No. VSD9605S204
D4

Service Manual

Supplement

NTSC / PAL **Video Product**

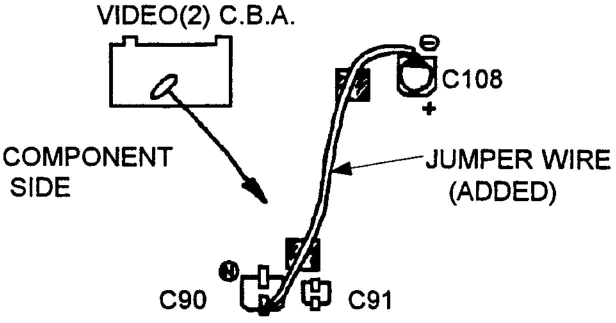
Subject : Improvement of EE Chrominance Level

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830P	16	VSD9403M246	I4T
AG-MD830E	11	VSD9408M637	I4T

Board: VIDEO (2) C.B.A.

In order to improve the EE Chrominance level (out of spec.), following modification has been performed.



Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
R3351	ERJ6GEYJ122	ERJ6GEYJ132	M.RESISTOR CH 1/10W 1.3K	1	C	
R3372	ERJ6GEYJ132	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	C	
R3375	ERJ6GEYJ122	ERJ6GEYJ112	M.RESISTOR CH 1/10W 1.1K	1	C	
R3435-37	ERJ6GEYJ750	ERJ6GEYG750	M.RESISTOR CH 1/10W 75	1	C	
IC3310	NJM2233BMA	----------------		0	E	
C3382	ECUM1H271JCN	----------------		0	E	
C3390	ECEV0JN470S	----------------		0	E	
C3391	ECEV0JV470S	----------------		0	E	

T E2-3986

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Subject : Countermeasure of mulfunction in Audio Dubbing

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830P	17	VSD9403M246	I4T
AG-MD830E	12	VSD9408M637	I4T

Board: AUDIO C.B.A.

SYMPTON: During Audio Dubbing mode, the level of recorded audio signal which is the other track of audio dubbing track may be reduced (erased) about 3dB.

REMEDY: The following modification has been performed.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
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E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
R4104	ERDS2TJ4R7	ERDS2TJ120	C.RESISTOR 1/4W 12	1	C	AG-MD830P
R4104	ERDS2TJ4R7	ERDS2TJ150	C.RESISTOR 1/4W 15	1	C	AG-MD830E
R4107	ERJ6GEYJ333	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	C	AG-MD830P
R4107	ERJ6GEYJ473	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	C	AG-MD830E
R4112	ERJ6GEYJ333	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	C	AG-MD830P
R4112	ERJ6GEYJ473	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	C	AG-MD830E
				0	E	
				0	E	

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Order No. VSD9605S601

Service Manual

Supplement

Video Product

Subject : Correction of Service Manual

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.
AG-MD830E	9	VSD9408M637

The information in the service manual has been corrected as follows.

Part Number						
Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
C6053	----------------	ECQV1H274JZ	P.CAPACITOR 50V 0.27UF	1	E	
C6044	ECUV1H221KBN	--------------------		0	E	
R3016	ERJ6GEYJ122	ERJ6GEYJ821	M.RESISTOR CH 1/16W 820	1	C	
R3017	ERJ6GEYJ122	ERJ6GEYJ471	M.RESISTOR CH 1/16W 470	1	C	
R3014	ERJ6GEYJ103	ERJ6GEYJ102	M.RESISTOR CH 1/16W 1K	1	C	

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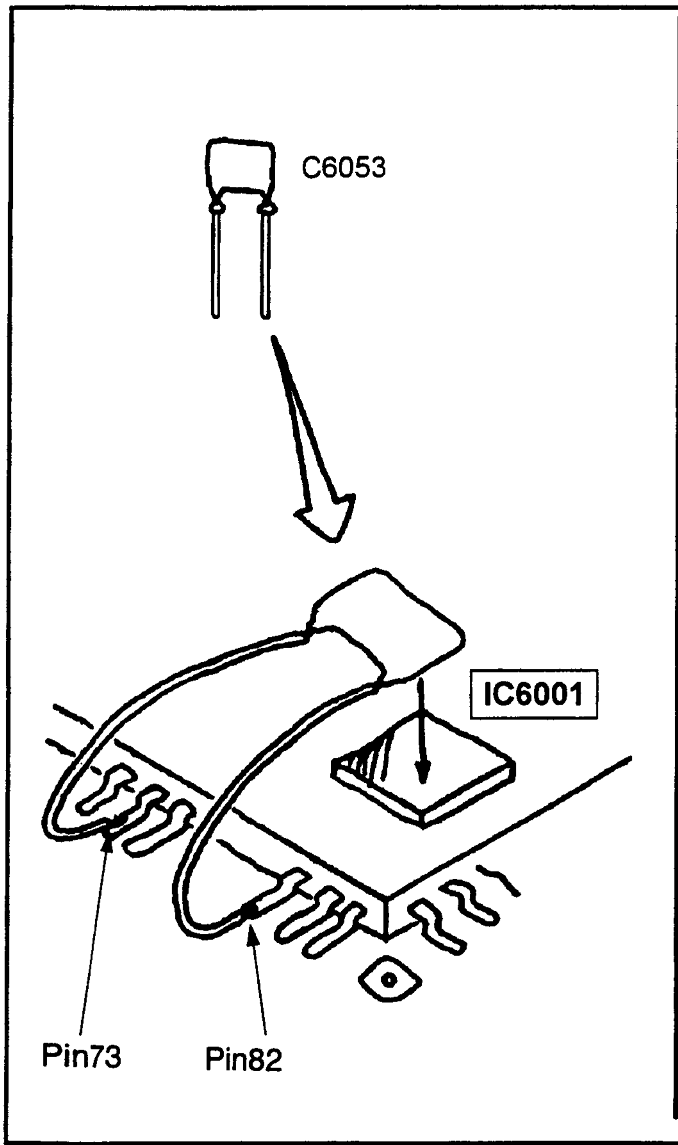
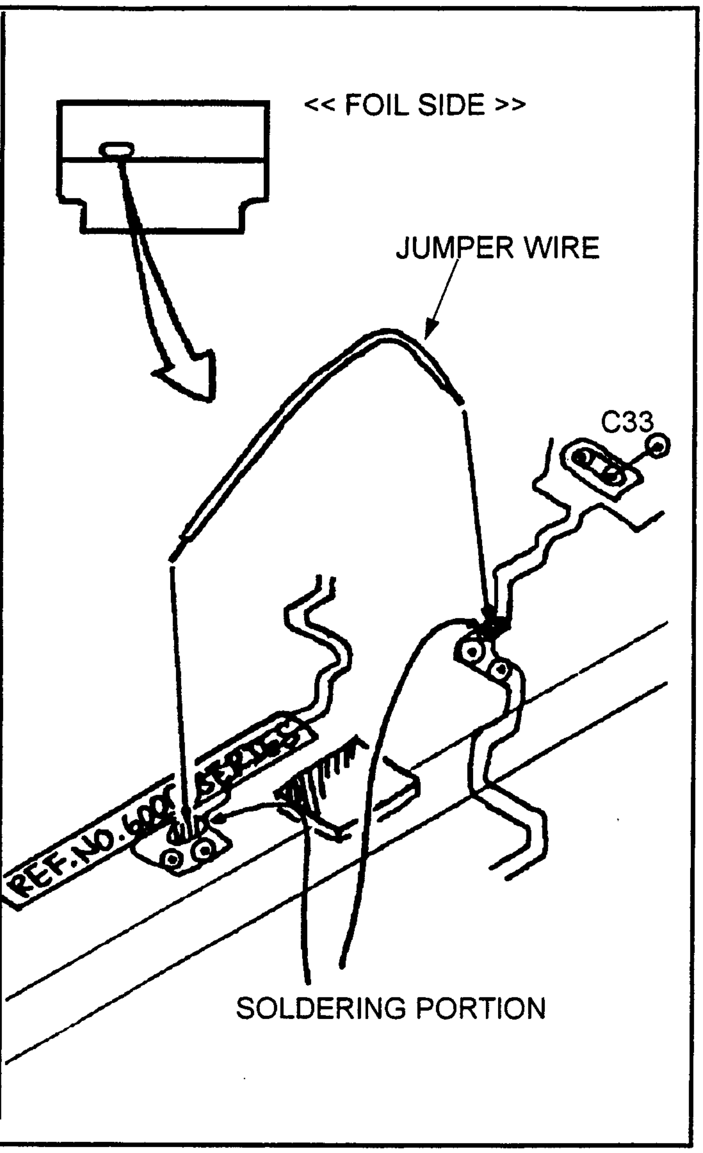
SYSCON & SERVO C.B.A.


C6053
IC6001
Pin73
Pin82


<< FOIL SIDE >>
JUMPER WIRE
C33
SOLDERING PORTION

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Order No. VSD9605S602

Service Manual

Supplement

Video Product

Subject : Change of Transistor

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830E	10	VSD9408M637	I4T

Board: SYSCON & SERVO C.B.A.

In order to increase hfe of transistor, following transistor has been changed.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
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D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
QR2904	MRN2404	MRN2402	TRANSISTOR-RESISTOR	1	C	

TE2-3961

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Order No. VSD9608S603
D

Service Manual

Supplement

Video Product

Subject : Change of Capacitor

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-7150-E/B	50	VSD9109M615	A5----
AG-7350-E/B	53	VSD9109M615	A5----
AG-7355-E/B	38	VSD9110M616	A5----
AG-6040E	30	VSD9209M625	A5----
AG-6730E	34	VSD9212M628	A5----
AG-6045E	5	VSD9501M640	A5----
AG-5700-E	18	VSD9202M619	A5----
AG-MD830E	15	VSD9408M637	A5----
AG-6840HE/B	32	VSD9004M602	A5----
AG-6850H-E/B	32	VSD9006M603	A5----
AG-6124E/B	9	VSD9406M635	A5----
AG-5260E/B	9	VSD9404M633	A5----
AG-7600E	8	VSD9502M642	A5----
AG-7700E	12	VSD9502M642	A5----
AG-8600E	6	VSD9512M601	A5----
AG-8700E	6	VSD9512M601	A5----

Board: POWER

Reason for Change
- ☐ The following part(s) has(have) been changed for serviceability improvement.
- ☐ The following part(s) has(have) been changed for productivity improvement.
- ☐ The following part(s) has(have) been changed for standardization.
- ☒ The following part(s) has (have) been changed for the safety regulation.
- ☐

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D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
C1008	VCK0041	VCK0259K331A	CAPACITOR	1	C	AG-7150/7350/7355-E/B
C1045	VCK0041	VCK0259K331A	CAPACITOR	1	C	AG-7150/7350/7355-E/B
C1003-5	VCK0040	VCK0259K221A	CAPACITOR	3	C	AG-7150/7350/7355-E/B
C1005	VCK0046	VCK0260K222A	CAPACITOR	1	C	AG-6040/6730/6045E
C1010	VCK0046	VCK0260K222A	CAPACITOR	1	C	AG-6040/6730/6045E
C10038	VCK0046	VCK0260K222A	CAPACITOR	1	C	AG-6040/6730/6450E
C1001-3	VCC0046	VCK0260K222A	CAPACITOR	3	C	AG-6040/6730/6450E
C1006	VCC0046	VCK0260K222A	CAPACITOR	1	C	AG-6040/6730/6450E
C1036	VCC0046	VCK0260K222A	CAPACITOR	1	C	AG-6040/6730/6450E
C1037	VCC0024	VCK0262K222A	CAPACITOR	1	C	AG-6040/6730/6450E
C1002-3	VCK0083	VCK0260M332A	CAPACITOR	2	C	AG-MD830E/B
C1004-5	VCK0043	VCK0259M102A	CAPACITOR	2	C	AG-MD830E/B
C1102-5	VCK0083	VCK0260M332A	CAPACITOR	4	C	AG-5700-E
C1003-4	VCK0046	VCK0260K222A	CAPACITOR	2	C	AG-6840H/6850HE
C1005	VCK0046	VCK0260K222A	CAPACITOR	1	C	AG-6840H/6850HE
C1027-28	VCK0045	VCK0260K152A	CAPACITOR	2	C	AG-6840H/6850HE
C1029	VCK0045	VCK0260K152A	CAPACITOR	1	C	AG-6840H/6850HE
C1010	VCC0024	VCK0262M222A	CAPACITOR	1	C	AG-5260E/B
C1011	VCC0046	VCK0260M222A	CAPACITOR	1	C	AG-5210E/B
C1012	VCC0046	VCK0260M222A	CAPACITOR	1	C	AG-5210E/B
C1010	VCC0024	VCK0262M222A	CAPACITOR	1	C	AG-6124/5260E/B
C1011-12	VCK0046	VCK0260M222A	CAPACITOR	2	C	AG-6124/5260E/B
C1001	VCC0024	VCK0262M222A	CAPACITOR	1	C	AG-6124/5260E/B
C1002-3	VCC0046	VCK0260M222A	CAPACITOR	2	C	AG-6124/5260E/B
C004	VCC0024	VCK0262M222A	CAPACITOR	1	C	AG-6124/5260E/B
C1005-6	VCC0046	VCK0260M222A	CAPACITOR	2	C	AG-6124/5260E/B
C1001-2	VCK0083	VCK0260M332A	CAPACITOR	2	C	AG-7600/7700/8600/8700E
C1004-5	VCK0044	VCK0260M102A	CAPACITOR	2	C	AG-7600/7700/8600/8700E

! Warning
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advice non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service manual by anyone else could result in serious injury or death.

Order No. VSD9805S211
D4

Service Manual

Supplement

NTSC/PAL **Video Product**

Subject : Countermeasure for Auto Repeat Playback

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830P	24	VSD9403M246	F7----
AG-MD830E	19	VSD9408M637	F7----

Board: VIDEO 2

Symptom : Playback function may be stopped in the auto repeat mode.

Cause : The "No Video Detection Circuit" may operate correctly due to the temperature charastaric of the AFC circuit on the "No Video Detection Circuit" .

Remedy : In order to prevent this symptom, the type of capacitor (C3318) has been changed.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
C3318	ECUV1H392KBN	ECQB1H392JF	C. CAPACITOR 50V 3900P	1	C	

TE2-4916

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Order No. VSD9805S214
D1,4

Service Manual

Supplement

NTSC / PAL **Video Product**

Subject :Change of Bias Transformer

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-6840H-P	49	VRD8909M237	F7----
AG-6850H-P	47	VRD9001M243	F7----
AG-6842HP	11	VSD9302M230	F7----
AG-MD830P	23	VSD9403M246	F7----
AG-7350-P	63	VSD9106M207	F7----
AG-6840H-E/B	36	VSD9004M602	F7----
AG-6850H-E/B	36	VSD9006M603	F7----
AG-MD830E	18	VSD9408M637	F7----
AG-7350-E/B	54	VSD9109M615	F7----

Circuit: AUDIO

Reason for Change

☐ The following part(s) has(have) been changed for serviceability improvement.
☐ The following part(s) has(have) been changed for productivity improvement.
☐ The following part(s) has(have) been changed for standardization.
☐ The following part(s) has (have) been changed for the safety regulation.
■ The following part(s) has (have) been changed for durability improvement.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
T4001	VLT0538B	VLT0538C	TRANSFORMER	1	C	

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Order No. VSD9811S603

Service Manual

Supplement

PAL **Video Product**

Subject : Change of Delay Circuit

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830E	22	VSD9408M637	K7-----

Board : VIDEO 1

Reason for Change
The following parts have been changed because of discontinuation of Delay Line.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
DL3803	VLD0089	VEP00Z44C	DELAY LINE	1	D	
		VEE0C59	CABLE	1	E	
C3835	ECUM1H680JCN	----		0	E	
L3811	VLQ0163J150	----		0	E	
L3812	VLQ0163J150	----		0	E	
R3837	ERJ6GEYJ561	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	D	
R3860	ERJ6GEYJ681	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	D	
	VHN0030	VHN0030	RIVET	2	E	3 Pcs → 2 Pcs

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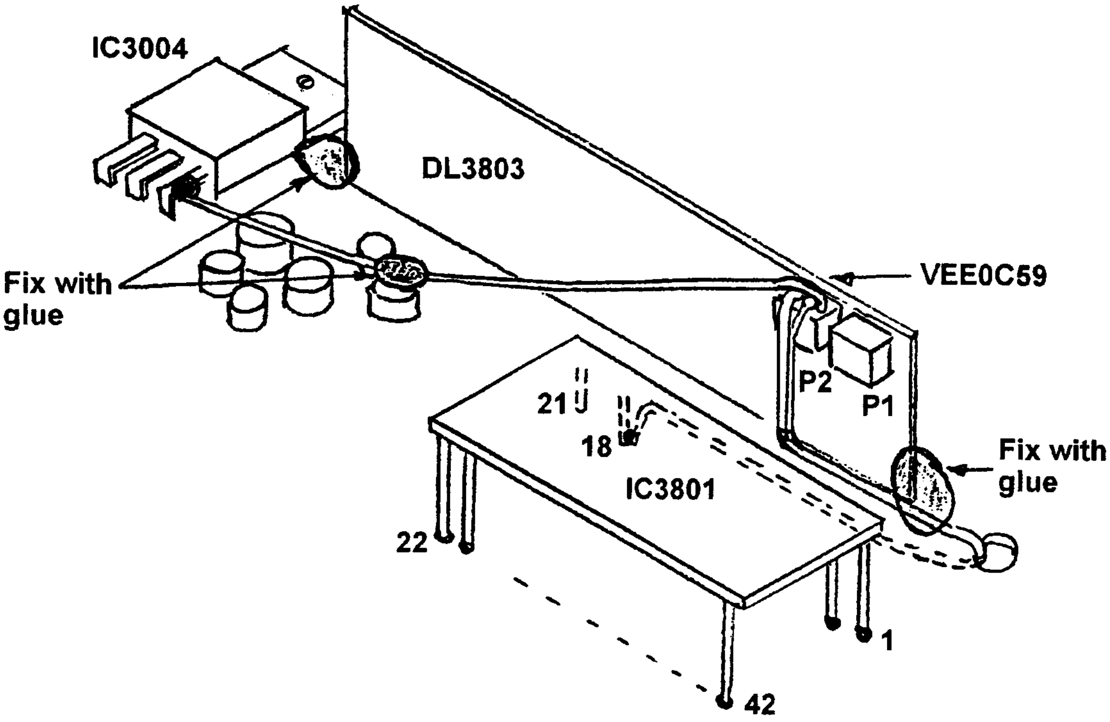
INSTALLATION OF CABLE



1. Remove the rivet(VHN0030) inserted into the hole by DL3803.
2. Install one side of the cable (VEE0C59) in the connector P2 of DL3803. (The shielding wire should be inserted into the terminal ② and ③. ② is signal and ③ is GND.)
3. Solder the wire of VEE0C59 (the wire connected to the terminal ① of P2 of DL3803) to the terminal 3 of IC3004.
4. Pass the wire of VEE0C59 (the wire connected to the terminal ② of DL3803) through the hole by DL3803 and solder it to the terminal 18 of IC3801.
5. Press down the cable so that the cable should lie along the surface of the P.C.Board.
6. Fix the delay line and the cable with glue as shown in the above figure. (Delay line should be fixed vertically.)

ELECTRICAL ADJUSTMENTS AFTER REPLACEMENT OF DELAY LINE

After replacement of delay line, the following electrical adjustments should be performed.
4-3-7. CNR ADJUSTMENT

CONTENTS

1. AG-IA232TC Product Information

2. RS-232C Protocols (Ver. 2)

1. AG-IA232TC Product Information

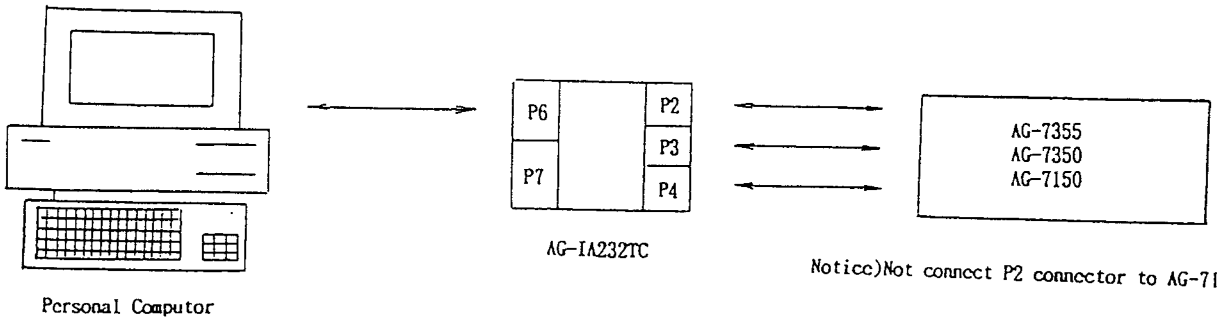
The RS-232C computer interface has become very popular recently due to its software interfacing which is incorporated into personal computers.
Recently introduced new models (AG-7355, AG-7350 and AG-7150), also incorporate the RS-232C interfacing.

This information explains the AG-IA232TC and RS-232C interface.

1) Product Method

(1) Outline

This model is an optional interfacing board used to control the VTRs (AG-7355, AG-7350, AG-7150) with the RS-232C computer control system.
The basic block diagram is shown below.



Notice)Not connect P2 connector to AG-7150

(2) Functions of this model

1) Front key operation
2) Address search by CTL/Time Code
3) Time Code Generator/Reader
4) Mode Status Reading
5) Looping through of up to 32 units

(3) VTR control functions are as follows

1) KEY CONTROL

The following VTR modes can be controlled by the RS-232C.

STOP
EJECT
REWIND
FAST FORWARD
STILL/PAUSE
RECORD

AUDIO-DUBBING
PLAY
REVERSE PLAY
REHEARSAL A-DUB
REHEARSAL REC
SHUTTLE SEARCH

2) COUNTER CONTROL

This controls the CTL counter which is inside the interface board as well as the reset counter, counter search and counter data of the VTR.

3) STATUS SENSE

Current Status modes of both interface board and VTRs can be sensed.

4) LTC READER (2 MODELS OF NTSC AND PAL VERSION)

5) LTC GENERATOR (2 MODELS OF NTSC AND PAL VERSION)

A TCG is incoporated and able to perform as follows:
(VTRs must be set to proper modes.)

(1) Records time code only continuously from beginning to end of tape.
(2) Records video signal and TC simultaneously from REC RUN POINT.
(3) Presets time code data.
(4) Time code has both Free Run and Rec Run.
Free Run has both "REGEN" and "PRESET" modes.
(5) It's able to read and write user's bit.

(6) Drop/Non Drop Frame Setting.

When an external TCR/G is used, it is not recommended to connect this internal TCR/G.
Make sure to set EXT/INT of DSW2-8 to "EXT (OFF)" when the internal TCR/G is connected.
If this switch is set to "ON" and the internal TCR/G is connected, the TCR/G this unit does not operate or even may damage the TCR/G.

6) Other Functions

(1) Reset of transmitting conditions
(2) ON line checking
(3) Group number Setting/Reset/Leader setting
(4) Stanby ON/OFF
(5) Digital (Other than AG-7355, it becomes
still when a command is received during
playback.)

7) External Interfacing Method

(1) External Transmit Method

RS-232C SERIAL COMMUNICATION CONDITION

BAUD RATE	1200/2400/9600/19200
BIT LENGTH	8BIT/7BIT
PARITY	NON/ODD/EVEN
STOP BIT	1/2

* Underline indicates initial setting

Connector :D-SUB 25P DCE Method (Corresponds to the Straight Cable)

INPUT CONNECTOR (P6)

1	FG
2	RXD (RECEIVE)
3	TXD (TRANSMIT)
4	SHORT (CONNECT) TO 5
5	SHORT (CONNECT) TO 4
6	SHORT (CONNECT) TO 20
7	GND20SHORT (CONNECT) TO 6

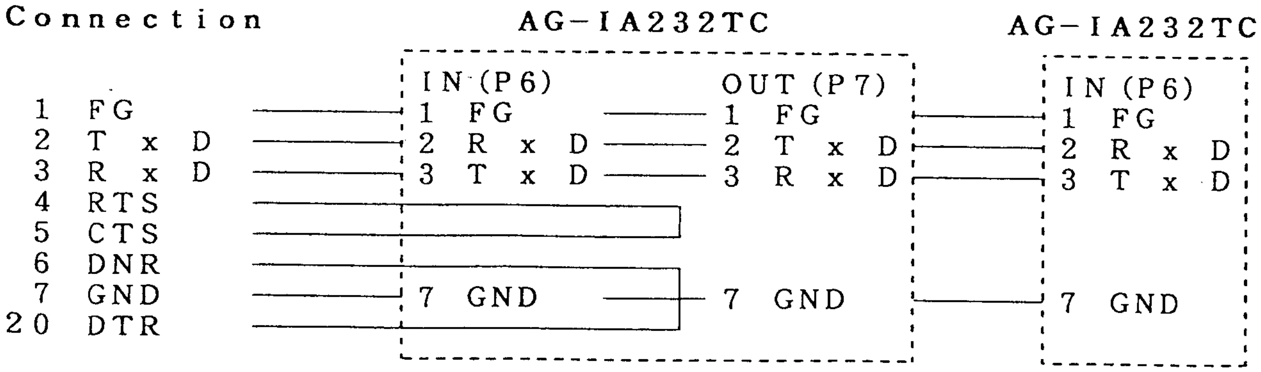
OUTPUT CONNECTOR (P7)

1	FG
2	TXD (TRANSMIT)
3	RXD (RECEIVE)
7	GND

Up to 32 VTRs can be connected by looping through. when looping through function is provided Cable MAX length is 15m.

Note) RS-232C (AG-A730E) can not be connected since the power source is not a personal computer.

Connection


AG-IA232TC
AG-IA232TC
1 FG
2 TxD
3 RxD
4 RTS
5 CTS
6 DNR
7 GND
20 DTR
IN (P6)
1 FG
2 RxD
3 TxD
7 GND
OUT (P7)
1 FG
2 TxD
3 RxD
7 GND
IN (P6)
1 FG
2 RxD
3 TxD
7 GND

(2) DIP SWITCH Set conditions of transmitting, Address and INT/EXT of TCG

DIP SW1

1 BIT LENGTH	0. 7BIT 1. 8BIT
2 STOP BIT	0:STOP 1 1:STOP 2
3, 4PARITY	(0. 0) ODD (1. 0) EVEN (X. 1) NON
5, 6Baud Rate	(0. 0) 1200 (1. 0) 2400 (0. 1) 9600 (1. 1) 19200

DIP SW2

1~5 ADDRESS	ADDRESS 0 ~ ADDRESS 31
6 TCG INT/EXT	0:EXTERNAL 1:INTERNAL 0-OPEN/OFF 1-CLOSE/ON

8) Internal Interfacing Method

(1) Internal Transmitting

Connector P4

4, 10-GND
5 -SERIAL DATA (5Vp-p)
6 -SERIAL CLOCK (5Vp-p)
7 -CONTROL PULSE (5Vp-p) *
8 -OPEN
9 -5V

(2) Time Code Signal

Connector P3

1 — TC IN (AG-IA232TC ⇨ DECK)
2 — GND
3 — TC OUT (DECK ⇨ AG-IA232TC)
4 — GND

Specifications are same as AG-7330.

Connector P2

1 — Hss (REC SYNC) 4Vpp (min3. 5)
2 — NC
3 — GND

2. RS-232C Protocols (Ver. 2)

(Notice) This Protocols chenge in time to time. If any proble should occur contact with your regional sales/service office.

1) Receiving format (controller ⇨ deck)

```
[STX]([AD][Address] [;])  [Command] [:][Data]   ([;][Command]   [:][Data]..)[ETX]
(02h)(41h (0-31,A-Z)(3Bh) (XX XX XX)(3A)(XX-XX) (3Bh)(XX XX XX) (3Ah)(XX-XX) (03h)
    ,44h) ascii code        20h < XX  < 7Fh
```

( )	Data in parentheses ( ) may be omitted.
AD	Address identifier. This shall be AD' (binary 41h,44h) in ASCII code.
Address	Address data. This shall be 2 characters. Addresses shall be 0 to 31 (limited by hardware). Groups shall be 0A to 0Z.
;	The semicolon shall follow the address designation, and shall serve as the code to separate commands. Use of the semicolon allows multiple commands (and data).
Command	Command idetifier. Commands shall be 3 byte identifiers.
:	The colon shall separate commands and data.
Data	This adds data with the required number of bytes.

(1) When a single deck is connected to the controller

The transmit command starts with STX (Start of Text = 02h). Command then identifies the command and adds the required data. Transmission ends with ETX(End of Text = 03h).

(2) When multiple decks are connected to the controller

After the above-described STX is received, the identifier (AD) and deck address or group number are added to designate one of several, or a group of decks.
When one statement contains several commands, commands are effected for that address from the time of identifier (AD) reception until the final ETX signal is received.
Once an address has been received, it cannot be changed until the next STX is transmitted — an error is generated if you try to change the address. When there is a command without a designated address, all connected decks receive and respond to the command, so addresses (or groups) must be designated when several decks are connected. With no designation, the hardware competes for communication lines, preventing proper transmission.
When the group number is received, data remaining in the transmit buffer is immediately cleared, and the communication line then goes to standby. The group number is set by the 232C command.
The 232C command can also designate one deck within the group as group leader.
In this case, the groupsetting command triggers only the group leader to return ACK and NACK signals. Group leader designation is only in effect when the group number has been designated

Standby condition High-impedance condition for the communication line.

Address: Indecated the deck's absolute address. Hardware designates one address per unit. The protocol address is given in two-column formatsfrom 00 (30h 30h) to 9 9(39h 39h). The absolute addresses for hardwareare 00 to 31 for connecting up to 32 units. Designating addressesother than these has no effect because no other addresses exist.

Group number: This number indicates a group of decks. It allows several decks to be designated. The number is set by theRGS command. Up to 26 groups can be desingated in two-column formats ranging from 0A(30h 41h) to 0Z(30h 5Ah).The default group number, such as when power is turned on, shall be 0A(30h 41h).

(3) If STX is re-input before ETX is input, the internal transmit buffer on the deck side is cleared, priority is given to the received STX signal, and the buffer waits for the next command (or address) after STX to be input.

(4) When the internal transmit buffer on the deck side is full, it clears and then waits for the next command.

2) Transmit format (deck ⇨controller)

When several commands are transmitted simultaneously, an ACK command signal is transmitted to last command received (prior to the ETX transmission). This is not true for the NACK return signal.

(1) **ACK without answer**

Returns the transmitte identifier.
[STX] +[Command]+[ETX]
(02h)   (41h-5Fh)(03h)
Example:[STX] OPL [ETX] ⇨[STX] OPL [ETX]

(2) **ACK with answer**

Returns required data and identifiers after the second byte.
[STX]+ [Command After 2nd Byte] + [Data] + [ETX]
(02h)   (XX XX)   (XX XX)   (03h)
Example:[STX]QOP [ETX] ⇨ [STX] OEJ [ETX]

(3) **NACK**

When an NACK signal is transmitted, details indicating the reason why reception failed are returned in the form below: If an abnormal communication condition error is detected, the error signal is sent ahead of the NACK signal. This interrupts any data currently being transmitted, regardless of whether it has been completely received or not. Thus, the NACK signal is sent immediately, triggering the standby mode to await the next STX signal. NACK is only transmitted if a group leader is designated in the group setting mode several commands trasmitted simultaneously (transmitted in sections, each separated by a semicolon ';') generates an error. The transmit and receive buffers clear at that point to await the next STX signal.

[STX] + [E] + [R] + [ERROR CODE] + [ETX]
(02h)   (45h)(52h)   (03h)
1(31) : VTR MODE ERROR(Abnormal of sensing tape end or start point)
2(32) : VTR MODE ERROR(Elevator)
3(33) : VTR MODE ERROR(Tape loading)
4(34) : VTR MODE ERROR(Cylinder)
5(35) : VTR MODE ERROR(Reel)
6(36) : VTR MODE ERROR(Tension)
7(37) : VTR MODE ERROR(Tripped solenoid)
D(44) : VTR DEW
E(45) : COMMAND AND DATA SET ERROR

* Command and data setting error :Generated on reception of a non-existent command, an incorrect data code, data outside of the allowable range, or a non-receiving mode command.

[NACK] + [ERROR CODE]
(15h)
1(31): Parity error
3(33): Framing error
4(34): Over run error

(4) If an address other than the one for the deck or the group is designated during or prior to ACK and NACK transmission, then data being returned or held in the buffer are cleared.

(5) An ACK response is generated only to the last command received (prior to the ETX signal), When several commands (transmitted in sections, each separated by a semicolon ';') are sent simultaneously.

3) Panasonic protocol command list

Basic The leader shall be the group name for each function, then assign more detailed functions.

[0] Basic operation

OEJ	Eject Command
OSP	Stop Command
OFF	Fast Forward Command
ORW	Rewind Command
ORC	Record Command
OPA	Pause Command
OPL	Play Command
OPR	Play Reverse Command
ODN	Digital On (video memory) Command
ODF	Digital Off Command
OBN	Standby On Command
OBF	Standby Off Command
OSF:data	Shuttle Search Forward (CUE) Command and Data
OSR:data	Shuttle Reverse (REVIEW) Command and Data
	data : speed data 0~8 0=STILL
OPP	Play Pause Status
ORP	Record Pause Status

[E] Edit

EAD	Audio Dubbing Command
EAP	Audio Dubbing Pause Status

[I] In/output

IRR	Rehearsal Record Command
IRA	Rehearsal Audio Dubbing Command

[C] Counter

CRT	Counter Reset Command
CTL	Counter CTL Mode Set Command
CTC	Counter Timecode Set Command
CWT	Write only Timecode Command
CTP	TC Preset Mode Set Command
CTR	TC Regenerate Mode Set Command
CTF	TC Free Run Mode Set Command
CRR	TC Rec Run Mode Set Command
CUS:data	UB Preset Command and Data
CTS:data	TC Preset Command and Data
CDN	Drop Frame On Command
CDF	Drop Frame Off Command

[S] Search operations

SCP:data	Counter Search and Play Command and Data
SCS:data	Counter Search and Still Command and Data
SMC	Counter Search Mode Coarse(Search in FF and REW)
SMF	Counter Search Mode Fine(Search in shuttle search speed)

[R] Communication mode

RCR	Condition Reset Command (Resets communication conditions)
RCK	Online Check Command (Nothing is operating)
RGS:data	Group Set Command and Data
RGC	Group Cancel Command
RGR:data	Group Leader Set Command and Data (In effect only when the group is set)

[Q] Question

QOP	Question Operation example answer : play = OPL
QOS	Question Operation Status example answer : OPS0001684000 OPS+data(data is some status)
QCD	Question Counter Data example answer : fine and still search when TC mode = CDFS 9595929 CD+mode+data (mode : fine/coarse, still/play CTL data : sign + 9:59:59:29 LTC data : 23:59:59:29)
QCT	Question TC Mode example answer : free run and preset mode = CTFP CT + mode (mode free/rec run, regenerate/preset)
QCB	Question UB Generator Data example answer : CUS01234567 CUS+data(data = UB7 UB6 UB5 UB4 UB3 UB2 UB1 UB0)
QCU	Question Reading UB Data example answer : CUR89ABCDEF CUR+data(data = UB7 UB6 UB5 UB4 UB3 UB2 UB1 UB0)
QCS	Question TC Generator Data example answer : CTS23595929 CTS+data(data = 23:59:59:29)
QCF	Question Drop Frame Mode example answer : drop frame on = CDN drop frame off = CDF
QRG	Question Group Number example answer : group 0A = RGS0A RGS+address data
QID	Question DECK ID example answer : AG-IA232TC
QRV	Question VTR Rom Version example answer : V1.00 4/1/91 major.minor version and release date